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A Veterinary Retrospect for 1929.

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In this, the first of a proposed series of annual articles under the above title, the writer has endeavoured to recall, and briefly to remark upon, those events of more than ordinary interest which have transpired during the year just closed. It is almost inevitable that some omissions will occur, and the writer apologises to any who may feel themselves to be the victims of oversight.

PARLIAMENTARY.

COLONIAL SERVICE.—Perhaps the item of outstanding interest to the veterinary profession during 1929 was the issue as a White Paper of the report of the Departmental Committee appointed, under the Chairmanship of Lord Lovat, to enquire into the Colonial Veterinary Service. The recommendations of this committee were of immense importance and formed one of the most constructive contributions to the improvement of the status of the veterinary services ever made. At the moment of writing it is learned that the recommendations with regard to the award of scholarships are actually being adopted by the Government.

ACTS OF PARLIAMENT.—The text of the *Slaughter of Animals Bill* was issued on December 19th. Its object was to insure that all animals slaughtered in slaughter houses and knackers' yards should be humanely killed and that only competent and reliable men should be employed. It follows the lines of the Slaughter of Animals (Scotland) Act already passed into law. *The Importation of Dogs and Cats Order* was made operable as from January 1st, from which date it ordained that no canine or feline animal could be brought into Great Britain from any country except Ireland, the Channel Isles and Isle of Man, unless a licence from the Ministry of Agriculture had been previously obtained. Dogs and cats must for six months be detained and isolated at the expense of the owners upon the premises in the occupation, or under the control, of a veterinary surgeon, which shall have been previously approved in writing by the Ministry. The order extends to England, Wales and Scotland.

ELECTION.—Professor Share-Jones was unanimously invited to stand as Liberal Candidate for the Oswestry Division of Shropshire. At the last General Election he almost doubled the Liberal vote, reduced the Conservative majority by over 3,000, and increased the Liberal majority over Labour by more than 3,000.

GRANTS FROM THE DEVELOPMENT FUND.

The Animal Breeding Research Department, Edinburgh University, received £3,825.

Animal Nutrition Institute, Cambridge University, received £13,500.

Rowett Research Institute, Aberdeen University, received £11,570.

National Institute Research in Dairying, Reading University, received £12,320.

Department of Animal Pathology, Cambridge University, received £10,000.

Animal Diseases Research Association, Scotland, received £4,500.

Institute of Agricultural Parasitology (London School of Hygiene and Tropical Medicine), received £5,050.

Research into Foot-and-Mouth Disease (Ministry of Agriculture), received £14,500.

Research Institute in Animal Pathology (Camden Town), received £5,000.

Maintenance of Advisory Centres, £61,888.

The following institutions received special research grants:—

Hannah Dairy Research Institute and the Royal (Dick) Veterinary College for investigation of milk fever.

University College, Bangor, for liver rot treatment by carbon tetrachloride.

Liverpool University, for investigation into the deaths of ewes at lambing time.

South-Eastern Agricultural College, Wye, for a survey of parasitic worms.

Royal (Dick) Veterinary College, for dentition of pigs and nutrition of chickens.

Research Institute in Animal Pathology received £400 from other sources for a special investigation into bovine mastitis, *i.e.*, £300 from the Royal Agricultural Society and £105 from the British Dairy Farmers' Association.

ROYAL COLLEGE OF VETERINARY SURGEONS.

The Register showed a total membership of 3,476 as compared with 3,486 in the previous year. The list of Existing Practitioners was also reduced from 59 to 51—a total reduction of 18 registered veterinary surgeons.

PRESIDENT.—Professor J. F. Craig, M.A., M.R.I.A., was elected President in succession to Professor J. T. Share-Jones, D.V.SC., M.SC.

IRISH FREE STATE.—One of the outstanding events of the year was the completion of the preliminary negotiations with the Irish Free State for the purpose of regularising the relations of the College with that Dominion.

STUDY FOR DIPLOMA.—A great amount of intricate work was put in by the Council of the R.C.V.S. upon the revision of the Examination Syllabus. The outcome of this investigation was the recommendation by the Examination Committee that the four years' course of study for the Diploma should be extended to five years. This was approved, and it was proposed that the new scheme should come into operation as from August 1st, 1931.

DEPT. OF VET. MEDICINE

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Animals of the Poor.—The R.S.P.C.A. opened negotiations with the R.C.V.S. for the initiation of a scheme for the treatment in clinics of the sick animals of the poor. A referendum was made to the N.V.M.A., whose Divisions discussed plans in detail during a great part of the year. The matter is still *sub-judice*.

Royal Society of Medicine.—In 1929 the Roll of the Royal Society of Medicine contained the names of 81 Fellows, one Hon. Fellow, and one Associate Member, from Members of the R.C.V.S.

Sir John Moore, K.C.M.G., was the President of the Comparative Section during the year.

National Veterinary Medical Association.

The Association continued to grow and thrive, and its activities were apparent in every direction throughout the year.

Patron of the Association.—H.R.H. The Prince of Wales graciously consented to become Patron of the N.V.M.A.

President.—The unanimous election of Mr. G. P. Male as President, in succession to Dr. O. C. Bradley, was enthusiastically endorsed by the whole profession.

Congress.—Annual Congress was held at Ayr and was an entire success.

Membership.—The number of gentlemen elected to membership during 1929 was 68 as compared with 74 in 1928. At August, 1929, the membership stood at 1,622.

Public Appointments.—The Association has been ever watchful of the interests of the profession, and in pursuit of this ideal it became necessary in three specific instances to advise members not to apply for posts advertised, as the remuneration offered was below the minimum laid down by the Association. It was satisfactory to note that, as a result of the N.V.M.A. ban, the emoluments offered by the Glamorgan County Council were raised to conform with our standard.

Tuberculosis.—The scheme for the eradication of tuberculosis put forward by the West of Scotland Division appears to have been the most important Scottish event of the year. The scheme is still being discussed at length by Divisions throughout the country.

Royal Army Veterinary Corps.

Director-General.—Major-General W. S. Anthony, C.B., C.M.G., succeeded Major-General H. T. Sawyer, C.B., D.S.O., for the appointment of Director-General, Army Veterinary Services, with effect from December 1st, 1929.

Animal Strength.—So far as the Regular Army was concerned, its establishment in horses and mules was fixed at 17,796—a reduction of 800. The main requirements for 1929 were 4,832 for Cavalry, 6,507 for Royal Artillery, 662 for Royal Engineers, 870 for Royal Corps of Signals, and 2,316 for Infantry.

The Territorial animal establishment for 1929, some 19,000, showed a material reduction on former years. These reductions were mainly consequent on mechanisation, which has chiefly affected Cavalry, Field Artillery, and Royal Army Service Corps.

Personnel.—Consequent on the foregoing, the R.A.V.C. personnel, both Regular and Territorial, has been reduced *pro rata*. The establishment of veterinary officers of Territorial Army Divisions is now to be fixed annually on a proportional basis of animal establishments of Divisions, and pooled for duty.

"R.A.V.C. Journal."—It is interesting to record the birth of the *R.A.V.C. Journal*, a quarterly publication of some 40 pages. The first number was issued at the beginning of November, and was a bright and informative piece of literary work, which reflected great credit upon its Committee of Management and Editorial Staff.

The Veterinary Colleges.

Royal Veterinary College, Camden Town.—Fifty-seven students (13 women) entered College in 1929, as against 68 (15 women) in the preceding year. The number of students in attendance at the commencement of the Winter Session was 205 (29 women) as against 176 (16 women) in 1928. The number of animals treated was 979, compared with 836 in the preceding year. The daily average number of horses was 12 as against 10.

Six hundred and eighteen new subscribers were enrolled during the year ended March 31st.

The Rebuilding Fund of this College, which was opened in 1928, reached a total of approximately £38,000 by the end of 1929. Money came in but slowly, and one looks forward to renewed and greater efforts during the current year. The amount of money so far realised has at least qualified the R.V.C. to claim the grant of £35,000 (minimum) promised by the British Government.

Mr. Lethbridge, the Managing Director of Messrs. Spratts, Ltd., was the means of collecting a separate sum of £20,000 through the medium of the National Dog Week Council, one of whose branches, the Tail Wagger Club, was an especially valuable asset in this direction. This sum has been specifically allotted towards the expenses of founding, equipping and endowing a Chair of Canine Medicine and Surgery.

A wireless appeal by Professor Hobday for the poor outpatients' department resulted in the collection of a fund which, on March 31st, amounted to £1,704.

Lieut.-Colonel Sir Merrick Burrell, Bart., C.B.E., was elected as a Trustee, and to succeed Mr. E. M. Crookshank (deceased) as Chairman of the Governors; and Lieut.-Colonel Sir Archibald Weigall, K.C.M.G., was elected Treasurer of the Royal Veterinary College.

The Departmental Committee set up by the Ministry of Agriculture (to consider and report upon the reconstruction of the R.V.C.) in 1928, issued its conclusions in August, 1929. The report was of great length, importance and interest, and characterised the lack of State interest in, and support of, veterinary education as "a national disgrace," drawing attention to the fact that in every other country of Europe the State gave very substantial recognition (pecuniary and in other ways) not only to Veterinary Schools and Education, but to Veterinary Science and Research generally. It estimated the approximate cost of the suggested new building, including equipment and provision of an experimental farm for the Research Institute attached, at £325,000.

Glasgow Veterinary College.—There were 23 new students who entered this college in 1929. The total number of students in attendance (including five women), was 65.

Royal (Dick) Veterinary College.—New students for 1929 numbered 33, making the total number of students 179.

Considerable additions were made to the equipment of

the college, notably in the physiology and clinical departments. The urgent need for an X-ray apparatus was also met. A course of lectures in Genetics and Helminthology was instituted during the year under special teachers.

Liverpool Veterinary College.—An important step towards the completion of the equipment of the School of Veterinary Science was taken on June 28th, when the new veterinary hospital buildings were opened by Lord Howard de Walden.

Gifts to Research (from private sources).

Bequests to the veterinary colleges from the laity are extraordinarily few each year; thus it is refreshing to record even two such bequests; namely, a sum of £350 p.a. for three years by Messrs. Boots, Ltd., and the sum of £250 for the London College from Mrs. M. B. Keith, who died on December 13th, 1928.

In October the Council of the University of Liverpool acknowledged and accepted with grateful thanks a gift of £10,000 for the purpose of research to be conducted under the direction of William Prescott, Professor in the Department of Veterinary Pathology. The sum represented contributions of £6,000 and £3,000 from two anonymous donors, and £1,000 from Messrs. R. Silcock & Sons, Ltd., of Liverpool.

A gift of £30,000 was made to the Animal Breeding Research Department of Edinburgh University by Mr. T. B. Macaulay, president and managing director of the Sun Life Assurance Company of Canada.

The A.D.R.A. of Scotland received an anonymous gift of £10,000 to form an endowment fund for strengthening and/or increasing the research staff.

Research Scholarships.—Research scholarships to the value of £200 were awarded by the Development Commissioners to Mr. J. Bogue, M.R.C.V.S., and to Mr. J. Morton, M.R.C.V.S.; A Travelling Fellowship was also given to Mr. A. W. Stableforth, B.SC., D.V.S.M., to visit Germany. The Commissioners also approved of the creation of a lectureship in Helminthology at the Edinburgh University, and a grant-in-aid for the same.

Chadwick Trustee Travelling Scholarships.—An invitation was issued by the Chadwick Trustees to British subjects who have graduated in a British University (or who can produce evidence of attainments proving themselves capable of methodical study and research), to make application for two Travelling Scholarships of £400 each.

Veterinary Benevolent Societies.

National Veterinary Benevolent and Mutual Defence Society.—The Hon. Secretary reported a gratifying number of new admissions to membership, and the Hon. Treasurer stated that the Society was in a sound financial position. It was surprising, however, that such a small percentage of the profession took advantage of the very substantial benefits which the Society offered, in view of the ever-present danger which practitioners always run of becoming involved in litigation.

The membership in 1929 stood at over 300 and the assets of the Society were in a very healthy state.

The Victoria Veterinary Benevolent Association was unable to tell quite so good a story, the burden of the annual report centreing about the need not only for new subscriptions, but also for a retention of the old ones. Sad stories of want and privation among Members R.C.V.S., or their dependents were recounted, for whom no grants were available on account of shortage of funds. Indeed, the Fund was insufficient by £146 to meet the urgent calls made upon it.

It is greatly to be hoped that the report for 1930 will be of a more heartening nature.

There were, however, three gratifying incidents in the course of last year, one of which was the inauguration of a Thanksgiving Fund, to mark the recovery of H.M. The King from a long and tedious illness. This fund realised nearly £300. The other items were a splendid gift from Warwick Fowle, Esq., M.R.C.V.S., of £132, and from Sir John M'Fadyean of £100.

Developments in Medicine and Surgery, Etc.

Foot-Rot in Sheep.—Ludovic and Blaizot announced at the Academie des Sciences, Paris, that they had found, in the ulcers of foot-rot, a spirochæte to which they gave the name *Treponema podovis*. Treatment by intravenous injections of Novarsenobenzol has effected cures.

Distemper in Dogs.—Last year saw the culmination of five years of intensive study and research into distemper (undertaken by Laidlaw and Dunkin under the auspices of the Medical Research Council) in that they were able to publish a complete and successful method of immunisation against the disease. In that year, too, the commercial manufacture of the product passed officially into the hands of Messrs. Burroughs Wellcome & Co.

Efforts are continuing at Mill Hill and Beckenham for the perfection of the method.

Abortion.—Huddleson, in America, put into trial a living non-virulent *B. abortus* strain for the purpose of vaccination in place of the usual vaccines which may have some residual virulence. Huddleson's vaccine is still in the experimental stage, but he asserts that it produces immunity and is quite safe even for pregnant animals.

B. abortus is apparently more widespread than was previously imagined, as it was found in the pus from cases of fistulous withers in horses, by Rinjard.

Abortus Infection in Man.—Evidence accumulated during the year of the occasional danger of this organism to the human species. Medical laboratories increasingly turned their attention to the matter and several cases were added to the records.

Fowl Pox.—The Ministry of Agriculture issued a new vaccine, which experiments have shown to be a very promising protective.

Tuberculosis.—The campaign for the eradication of this disease in U.S.A. and Canada made great headway during the year. In his report for 1929, the Veterinary Director-General of the Department of Agriculture, Canada, said that the persistent and increasing demand from live stock owners for the continuance of the work indicated that the policy which had been adopted was sound, practical and beneficial.

Liver Fluke Treatment.—Much interest was aroused by Mr. Montgomery (Bangor) in the treatment of liver-rot in sheep, and further satisfactory results were achieved by the administration of carbon tetrachloride in capsule.

Milk Fever.—Researches into the etiology of this disease have been widespread and numerous throughout the year. A considerable sum of money was granted for this purpose

by the Development Commissioners, the work to be undertaken by Professors Dryerre and Greig of the "Dick" College, and by Dr. N. Wright of the Hannah Dairy Institute.

Much attention was focussed upon the use of calcium gluconate in the treatment of milk fever. The method yielded encouraging and, indeed, striking results; the investigation is continuing.

Lamb Dysentery.—A vaccine and a serum were prepared by the Wellcome Research Laboratories and were used experimentally for bacillary lamb dysentery, the vaccine being employed for ewes and the serum for lambs.

Grass Sickness.—A full programme of investigation into "grass sickness" in horses was carried out by the A.D.R.A., but the cause of the disease was not discovered. Over a dozen specialists in various branches of science have been collaborating.

Joine's Disease.—Chazeau and Musso published the results of the use of a methylic paratubercle antigen (Boquet and Megre) which, during the past two years, indicated that young animals could be cured rapidly after one injection; adult cattle recently affected were cured rapidly after two to four injections. Only partial success was obtained in animals which had been infected for some months.

Diseases of Small Animals.—No headway seems to have been made by bacteriological research workers into the etiology of such diseases as canine typhus (Stuttgart), hæmorrhagic enteritis of greyhounds, contagious feline enteritis, interdigital cysts, etc.; if, indeed, any serious work was even undertaken. No observations were published.

Canine Surgery, on the other hand, made great advances during the year, and special notice must be given to the increased use of electric illuminating apparatus for the diagnostic inspection of internal cavities. For instance, Vet. Dr. H. Suchanek published in 1929 a brochure upon clinical research undertaken by himself (with the aid of a grant from the International Education Board of New York) upon endoscopy. It treated fully of cystoscopy, gastroscopy and rhino-laryngoscopy in horses, and of œsophagoscopy in dogs and cats.

Veterinary Instruments.—An instrument which commanded the most attention was the Danish Embryotome invented in 1929 by Thyson. A description of its construction and use appeared in the *Veterinary Record* of September 7th.

Veterinary Literature.—Among sundry other works affecting the veterinary surgeon, which were published in book form during last year, the following might be mentioned:—

"Helminthology, Veterinary and Medical." By H. A. Bayliss, M.A., D.SC.

"The Law Relating to Medical, Dental and Veterinary Practice." By F. Bullock, LL.D.

"Use of Iodine and its Compounds in Veterinary Practice." By Lieut.-Colonel H. A. Reid, O.B.E.

"Examination of Horses for Soundness." By A. D. McGregor, F.R.C.V.S.

"A Laboratory Manual of Milk Inspection." By A. C. Aggarwala, B.SC.

"Ophthalmologie Vétérinaire" (2nd Edition). By Col. E. Nicholas.

"Canine Nursing." By D. E. Wilkinson, M.R.C.V.S.

"Diseases of Sheep." Second Edition. By E. T. Baker, D.V.M.

"Diseases of Animals in Tropical Countries." Second Edition. By C. R. Edmonds, M.R.C.V.S., and Colonel G. K. Walker, C.I.E., O.B.E., F.R.C.V.S.

Fleming's "Veterinary Obstetrics." Fourth Edition. Revised by Professor J. Craig, M.A., M.R.C.V.S.

"Poultry Diseases, including Diseases of other Domesticated Birds." Fifth Edition. By B. F. Kaupp, M.SC., D.V.M.

"Poultry Diseases." By Van Heelsbergen.

"System of Bacteriology in Relation to Medicine." By Med. Res. Council.

"Veterinary Pathology." Ninth Edition. By Kitt.

This list could not be described as extensive when compared with the emanations of some other years and of other professions, but one fully realises the time-consuming and exacting nature of such undertakings for busy practitioners.

It it within my knowledge that the time has now arrived when it will be no longer possible for publishers to undertake the publication of veterinary works unless they are in some way subsidised. The demand in 1929 for books on veterinary science was so lamentably small that this unhappy state of affairs becomes inevitable.

Numerical Strength of Horses.

In sharp contrast to the state of affairs obtaining in the Army, it is good to be able to observe that commercially there were heartening signs of a return to the horse. *The Times* of January 7th, 1929, quoted Major N. Thompson (President of the Kingston Shire Horse Society) as being emphatic that the horse was slowly coming into its own again. Ponies were then selling at from 30 to 60 guineas each.

At a Livery Dinner of the Farriers' Company held on January 18th, it was stated that, in spite of the advent of motor traction, the number of horses in the City of London was increasing, and that the Company had registered over 9,000 shoeing smiths.

At the London Cart Horse Parade Society's competition on Whit Monday of last year, there was no diminution in the number of entries or the quality of the turn-outs, in spite of the greater use of motor transport. The increased number exhibited that year over previous years was a clear indication that the heavy horse was gaining favour in industrial activity. In 1926 there were 519 horse entries; in 1927. 801 entries; and in 1928, 814; whilst in 1929 the entries reached 834.

As regards other parts of the world, the last statistics of Australia showed a horse strength of 2,250,361. Thirty years ago France had 2,917,000 horses and 1,672 motors. With 750,000 more motors to-day she has, nevertheless, three million horses. Germany claims 3,805,000 horses, excluding Army horses, and there are some 20,000,000 horses and mules in the U.S.A.

Obituary.

The obituary list for 1929 was, fortunately, of no greater than average length, and whilst unwilling to dwell upon such a sad subject in detail, one feels compelled to recall in this review the very great loss to the profession and

to the whole world of science and literature, of Major-General Sir Frederick Smith in his 73rd year.

We were grieved, too, to note the death of Lady M'Fadyean after many weeks of suffering. Lady M'Fadyean was the eldest daughter of Professor Thomas Walley of Edinburgh, and our sympathies went out to Sir John in his grievous loss.

A devoted servant of his profession, namely John McKinna, F.R.C.V.S., of Huddersfield, also passed from our midst; and abroad we heard of the death of Colonel Eugene Nicolas (retired list of the French Army Veterinary Service) an Hon. Associate of the R.C.V.S.

The Governing Board of the R.V.C. sustained heavy losses in the Earl of Northbrook (Chairman), Mr. E. M. Crookshank (Chairman of General Purposes Committee), the Marquess of Lincolnshire (Vice-President) and Major-General Sir Henry Ewart (Governor).

Personal.

On the occasion of the 64th birthday of H.M. The King, the veterinary profession enjoyed triple representation in the list of birthday honours, when Mr. J. Ralph Jackson, Chief Veterinary Officer of the Ministry of Agriculture, received a Knighthood. Lieut.-Colonel F. J. McCall, M.C. (D.V.S., Tanganyika) was a recipient of a C.B.E., and Major H. Allen of an O.B.E., Military Division.

Major T. Lishman was called to the Bar of the Inns of Court. He is among the very few in the veterinary profession to hold such a distinction.

Mr. W. T. Oliver, M.R.C.V.S., was unanimously elected Mayor of Tamworth on November 9th.

As an expression of goodwill upon his retirement from professorial duty at the R.V.C. after 40 years of service, Professor Macqueen was presented with a handsome gift of plate.

Mr. R. S. Marshall, M.R.C.V.S., D.V.S.M., obtained a special appointment under the Colonial Office to found a research institute in Nigeria.

Mr. J. Morton, M.R.C.V.S., was similarly appointed to found a research institute in the Falkland Islands.

On the occasion of the 37th anniversary of the Honorary Secretaryship of both the N.V.M.A. and of the Midland Counties V.M.A., held by Mr. H. J. Dawes, F.R.C.V.S., the Midland Division was happy to present him with a gold cigarette case and handsome silver rose bowl in recognition of his really remarkable and unrivalled record.

The " first full-blooded veterinary surgeon " was born to Mr. and Mrs. E. L. Taylor (neé E. Gertrude Knight) of Guildford, both of whom are members of the veterinary profession.

Miscellaneous.

The Ministry of Agriculture received through Diplomatic channels a translation of particulars furnished by the Associacion Generale de Ganaderos (Gen. Soc. of Cattle Breeders of Spain) in respect of an essay competition promoted by the Association. Would-be essayists should refer for particulars to the *Veterinary Record* of November 30th.

A case of rabies was confirmed in a dog imported from India. The animal died in quarantine two days after arrival.

No cases of glanders were recorded during the year.

In June one or two cases of illness in human beings were ascribed as psittacosis contracted from parrots. Since then a number of similar occurrences have come to light, and there is much agitation in the medical world.

A very severe epidemic of septic (streptococcal) sore throat occurred among the population of Brighton. The outbreak was considered to be milk-borne.

The Eradication of Bovine Tuberculosis.

Scottish Branch, N.V.M.A., Scheme.

1. *Introduction.*—The Scottish Branch of the National Veterinary Medical Association having considered the scheme for the eradication of tuberculosis prepared by the West of Scotland Division of the Association, and the reports therefrom received from the other Divisions, the Branch submits the following scheme :—

2. In view of the serious losses incurred by stock owners in this country through bovine tuberculosis, and its bearing on public health, the Branch urges the necessity for a definite attempt being made to eradicate tuberculosis from our herds.

3. The Branch recognises the progress which has been made in North America by the use of tuberculin and the slaughter of reactors, and also in Denmark and elsewhere by the method of dealing with the disease associated with the name of Bang.

4. In view of the probable percentage of reactors in British herds, it appears impracticable to apply the American plan immediately in any widespread campaign in this country. The Branch has considered carefully the best means available for dealing with this problem of tuberculosis eradication and, believing that a combination of the American and the Bang methods is best suited to the needs of this country, recommends the adoption of the measures hereinafter described.

5. *Control.*—As the eradication of tuberculosis is essentially a live stock problem, the control of the scheme should rest with the Ministry of Agriculture and Fisheries.

Accredited Herds.

6. The first step should be towards the eradication of the disease from selected herds with a view to providing a reserve of tuberculosis-free cattle which would be available to replace reactors in the herds to be dealt with later.

7. To inaugurate the scheme, applications should be invited from owners desirous of taking advantage of the benefits conferred thereby and prepared to conform to the regulations governing the scheme as laid down by the Ministry. In selecting herds preference should be given to :—

(1) herds in which the incidence of tuberculosis is believed to be low;
(2) self-supporting herds;
(3) pedigree and milk-recorded herds;
and (4) herds so situated as to facilitate the formation of Accredited Areas which is dealt with in a later part of the scheme.

8. In view of the greatly increased danger to consumers of milk from a cow with tuberculosis of the udder in a small herd, early preference should be given to herds owned by small-holders, shepherds, etc.

9. The selected herds should be tested with tuberculin in such manner as may be laid down by the Ministry from time to time, and the reactors dealt with as circumstances permit. Where the number of reacting animals is sufficiently small that their immediate removal is economically practicable, they should be slaughtered and an equitable compensation paid to the owner. Where immediate removal is impracticable, the reactors should be segregated from the non-reactors. Where necessary, the Ministry should give assistance in the provision of suitable temporary buildings.

10. The tuberculin testing should be carried out by a practitioner selected by the owner until he reports that the regulations laid down by the Ministry have been complied with, and that he has tested the whole herd without finding a reactor; thereafter the crucial or determining test should be applied by a representative of the Ministry.

11. If no reactor be found at this crucial test, the herd should be added to a list of Accredited Herds which should be kept by the Ministry—an "Accredited Herd" being a tuberculosis-free herd which has been certified by the Ministry as having passed its crucial test—and the herd should then be governed by the conditions laid down for the maintenance of an Accredited Herd.

12. As the number of Accredited Herds and the reserve of tuberculosis-free animals increase, an increasing number of herds should be dealt with by slaughter of reactors in lieu of isolation, so far as the funds available for the financing of the scheme permit.

13. No animal should be added to an Accredited Herd unless it has come from an Accredited Herd or has been twice tested with an interval of a specified period between the tests and during such interval has been kept isolated from other bovine animals.

14. The detailed scheme should make provision whereby an owner, whose reactors are isolated under the Bang method, might choose at any time, when circumstances permit, to have his remaining reactors slaughtered and receive compensation.

15. All reactors should be indelibiy marked, and, in herds where the Bang method is practised, should only be disposed of for slaughter. The Branch realises that special provisions will be necessary to meet the case of a valuable breeding animal which reacts.

Accredited Areas.

16. As there is an admitted difficulty in maintaining a tuberculosis-free herd in the midst of surrounding infected herds, the next step in the eradication of the disease should be the formation of Accredited Areas, with a view to reducing the risk of re-infection of free herds.

17. It will be obvious that before this step can be taken a considerable reservoir of young tuberculosis-free cattle will have been formed through the operation of the Accredited Herds scheme.

18. Areas to which this part of the scheme is to be applied should be selected and delimited by the Ministry in consultation with the Local Authority and local veterinary practitioners. These areas should be formed on the application of any owner in a district where either 75 per cent. of the cattle are in herds which are accredited or in process of accreditation, or 75 per cent. of the herds are accredited or in process of accreditation, and, on such an area being formed, the remaining herds should be dealt with compulsorily in the same manner as those whose owners had come into the scheme voluntarily.

19. As eradication progresses and the size and number of free areas increase, it might be possible to hasten progress by reducing the percentage of cattle or herds required for the formation of a free area, from 75 per cent. to 60 per cent. or even 50 per cent.

20. In the formation of Accredited Areas the Branch recognises that difficulties will arise regarding interference with the normal cattle trade of the area, particularly with reference to the importation of stock from outside the area, and the Ministry will require to make regulations to guard against the risk of infection through imported stock which may be necessary for particular areas.

Compulsory Areas.

21. Before eradication is completed it may be necessary for the Ministry to adopt compulsory measures to deal with those parts of the country from which tuberculosis has not been eradicated by the foregoing measures. These residual parts of the country should be designated Compulsory Areas, and the herds therein should be dealt with in the same manner as those whose owners had come into the scheme voluntarily.

Maintenance of Accredited Herds.

22. Regulations will be necessary to govern the maintenance of Accredited Herds, and these should be framed by the Ministry. The Branch recommends that the owner of an Accredited Herd should be required to have his herd tested once a year at his own expense, the tuberculin being supplied free by the Ministry. A copy of the report of the tests must be sent to the Ministry by the veterinary surgeon. Any reactor discovered at such tests should be removed from the herd without delay, and a herd in which a reactor is discovered should be temporarily suspended from the list of Accredited Herds. Such a herd should be re-tested after a suitable interval by a representative of the Ministry, when, if no reactors be found, the herd should be restored to the list of Accredited Herds, and annual tests again carried out. Should, however, reactors be found at this later test, the herd should be dealt with as is laid down in the first part of the scheme with reference to the formation of Accredited Herds.

23. In accordance with the general principles of the scheme, compensation should be paid for reactors found in Accredited Herds, but the Ministry might reserve the right to reduce the scale of compensation where the re-infection of the herd was considered to be due to default on the part of the owner.

24. *General.*—The Branch is of opinion that the scheme outlined above can be carried out on a large or a small scale in accordance with the funds available, and the Branch urges that an annual grant be made for a period of years. This appears to be necessary so that such a programme may be arranged as the annual grant will permit being carried out.

25. From this grant should be paid :—

(1) the cost of testing;
(2) compensation for reactors;
(3) the cost of disinfection of premises;
and (4) provision of, or alternately, loans towards the provision of, necessary temporary buildings for the isolation of reactors.

26. In selecting herds for eradication it appears desirable that preference might be given to herds whose owners are willing, or which are within the district of a Local Authority which is willing, to bear part of the cost of the eradication in their herds or district.

27. The Branch believes that it is essential for the success of any such eradication scheme that only tuberculin of guaranteed potency be used, and recommends that the tuberculin used should be manufactured and supplied by the Ministry, or that alternatively a guarantee of standard potency be required by the Ministry from manufacturers.

28. The Branch recommends that to avoid abuses the possession of tuberculin by laymen should be prohibited.

29. The accreditation of herds presently licensed for the production of Certified or Grade A (Tuberculin Tested) Milk, and the acceptance of the tests carried out in Accredited Herds for the purpose of the Milk (Special Designations) Orders, appears to be a matter for negotiation between the Government Departments concerned.

30. The Branch in submitting this scheme has advisedly refrained from making reference to many matters which, although they have a most important bearing on the control of bovine tuberculosis, do not essentially affect the operation of the scheme.

(*Signed.*) W. Nairn, *President*,
Blairgowrie,
Perthshire;

Wm. C. Miller, *Secretary*,
Animal Breeding Research Department,
The University,
Edinburgh;

For Scottish Branch, National Veterinary Medical Association of Great Britain and Ireland.

. . . . . .

The foregoing scheme has been circulated to the Scottish M.P.'s, Scottish Government Offices, Agricultural Bodies of Scottish importance, Scottish Agricultural Press, Daily Press (Scotland), and Scottish Cattle Breed Societies. Anyone desiring copies can have them on application to Mr. Miller, as above.

. . . . . .

At the last meeting of the Central Executive of the National Farmers' Union of Scotland, the scheme was approved and a special committee was appointed to confer with the Scottish Branch in order to adjust details.—*Glasgow Herald.*

Clinical and Case Reports.

The Occurrence of the Larva of the Sheep Nasal Bot Fly (*Œstrus Ovis*) in the Trachea.

By M. K. Garudachar, G.B.V.C., Member of the Bombay C.V.D., Royal (Dick) Veterinary College; Edinburgh.

The purpose of this brief paper is to draw attention to the unusual presence of larva of *Œstrus ovis* in the trachea of the sheep. So far as is known, there has been no previous record of the larva in this location.

On December 21st, 1923, in response to a call, I visited the Government cattle farm at Tegur, Bombay Presidency, in order to attend to two sick rams. Of these rams the first died before I arrived. This animal had been a chronic patient and was said to have shown the following symptoms: Nasal discharge, sneezing, cough and occasional loss of appetite and, later on, emaciation, prostration and death. This condition had persisted for more than a year, namely, from December, 1922, to December, 1923.

The following clinical symptoms were noted in the second ram: Prostration, emaciation, joints stiff, temperature normal, breathing normal, pulse feeble and animal often coughing. On auscultation the lungs were found normal. There was also a constant movement of the head from side to side and the nasal discharge was sticky and purulent.

It was suspected that the animal might have been infected with *Strongylus rufescens*. Turpentine was given by inhalation. This treatment caused the liberation of four larvæ of *O. ovis* and consequently the first animal was submitted to *post-mortem*, when a number of larvæ were found in the upper third of the trachea. They were attached to the mucous membrane in lines and the lumen was partially occiuded. The trachea was much inflamed and the flesh was pale and flabby. The lungs were œdematous and loaded with a thick discharge, but no parasites were found either in the lungs or in the liver. The heart was full of venous blood. The other organs were found to be normal.

Since no improvement was shown by the second ram after the usual treatment of inhalation of turpentine, the farm was revisited at a later date. Trephining was resorted to, but only one larva was found in the frontal sinus. On January 10th, 1924, the ram was taken to the Dherwar Veterinary Hospital, where it was given a course of treatment, namely, inhalation of turpentine and general tonics, and the surgical wound was properly dressed.

The animal's temperature was normal throughout and it was able to take its hule and grain when hand fed. It collapsed on January 15th, 1924, and on *post-mortem* six larvæ were discovered in the upper third of the trachea, besides some dead ones in the nasal sinus. The larvæ appeared to be not fully developed, being slightly less than half-an-inch in length.

No evidence could be obtained as to the exact stage at which the migration to the trachea took place. It is probable that some of the earlier-stage larvæ, instead of passing to the frontal sinus, might have entered the naso-pharynx and passed posteriorly to the glottis, which

they might have entered to reach the trachea. It is not improbable that a few might have passed into the œsophagus, where they would be lost, but so far we have no facts in support of this hypothesis.

I am indebted to Dr. A. E. Cameron for his assistance in publishing this note and for having placed the literature at my disposal.

A Porcine Problem.

A correspondent writes:—"Three sows were each served by the same boar within 24 hours of each other; they farrowed down within 24 hours of each other, going full time. According to the bailiff, only three were born alive of the 30 odd pigs, and all were born in their membranes. Fed on toppings and wash from the house. The boar had previously produced about 200 pigs. Suggestions as to cause are invited."

Pasteurisation and Progress in Dairying.

Following upon the publication in the *Record* of the outspoken article by Dr. Menton and Mr. Steele-Bodger in which they describe what they regard as objectionable features of pasteurisation, we note with interest the acute controversy on the matter which has occupied much space in recent issues of *The Scottish Farmer*.

That periodical's attitude is vigorously indicated in the following extracts from its editorial columns:—

"As one of the wittiest speakers at more recent dairy congresses, on one occasion in our hearing, expressed it: pasteurised milk is milk which has not the decency to go sour when it is going bad. The sourness is retarded. We leave it at that.

"What is progress in dairying? The question is suggested by the implication in Mr. James Dunlop's recent letter that the attitude of this paper on the question of pasteurisation is not 'progressive.'

"Lest we should misinterpret what he has so copiously written we will not attempt to paraphrase Mr. Dunlop's idea of 'progress' in this connection. We will state our own. There is progress in milk production and distribution when the precious foodstuff comes from healthy cows, housed in clean and well-ventilated byres, and tended and milked by healthy men and women. There is progress when the milk so produced is distributed under conditions which make for cleanliness, freedom from pathogenic germs, external dirt, and contamination of any kind after it leaves the cow's udder. There would be progress all along the line in dairying were all the milk put on the market produced and handled in accordance with the requirements of the Milk Designations Order—'Certified' and 'Grade A (T.T.).' Substantial progress is being made when milk is supplied to the consumer in accordance with the requirements for the classification 'Grade A' as compared with 'Pasteurised.' The increasing number of clean milk competitions is demonstrating that there is no difficulty whatever in the ordinary dairy farm producing Grade A milk without incurring any ultra expenditure. Futher, provided the consumer would pay the price, there is no difficulty whatever in the great majority of dairy herds producing milk up to the standard required by designation Grade A (T.T.). But when this suggestion is made the great distributing combines have to be reckoned with. It pays them better to pasteurise milk than to foster and encourage a demand for Grade A (T.T.) milk. It is this mainly that bars progress in dairying."

Abstracts.

[**The Value of the So-called "Direct Centrifugal Flotation" Method of Lane as an Enrichment Method for Nematode Eggs and for Coccidia.** (Nieschulz, O., and Hofkamp, H. St., *D.T.W.*, 1930, 38, 8, 116-117).]

A modification of Lane's technique is adopted—a hand centrifuge is used and the usual conical metal centrifuge pot is replaced by a cylindrical vessel with four clips at the open end (picture given in the original article). Strong-walled test tubes, about 11 cm. × 14 mm., with a smoothly-ground mouth opening, are used. These fit snugly into the metal cylinders. The clips on the cylinder are so ararnged to hold a 18 mm. cover slip over the mouth of the test tube.

In the examination, fæces (about 0·5 c.cm.) are vigorously shaken up with water in the centrifuge tube and spun for precisely one minute at 1,000 r.p.m. The supernatant fluid and with it any fæcal particles lighter than water are poured off.

The sediment is carefully shaken up in a saturated NaCl solution (avoiding air bubble introduction as much as possible). The tube is replaced in the pot, filled to the brim with saline and any large floating fæcal matter is removed.

The fluid is spun for exactly one minute at 1,000 r.p.m. Eggs and coccidia rise to the surface and adhere to the cover slip. This is quickly (not slowly and carefully) removed, so that a large drop of fluid adheres to it. Examination is by the hanging drop method.

J. H. M.

[**Palisade Worm Disease in Foals.** (Fischer, *D. T. W.*, 1930, 38, 8, 117-118).]

The sexually mature worm is found in the large bowel and the larvæ in a branch of the anterior mesenteric artery (*Sclerostomum hidentatum*) and under the peritoneum (*Scl. c'entatum*) of horses and foals The larvæ may be taken in by the food or drinking water, the animals suffering most between the ages of 6-12 months. After this age the greatest danger is past. Wet weather favours spread. The symptoms vary—lassitude, increased temperature (102·2°-105·8° F.), with appetite either increased or diminished. There are indications of uneasiness, looking round at belly, stretching and lying down, diarrhœa of varying kind, occasionally of a bloody nature, loss of condition, symptoms of anæmia and in a few cases inflammation of the pleura, peritoneum and testes as well as inco-ordination of the hind quarters. It is possible that many of the cases in which "weakness of the loins" is seen and to which no cause can be assigned are caused by parasitisin (?Thrombosis).

Treatment of the ground is necessary in preventive measures. Swampy pasture is drained or railed off and a clean drinking supply provided, preferably from running water. The administration of anthelmintics to the mare prior to foaling is useful without danger. Clean straw should be provided for the young foals and the removal of fæces when possible diminishes the chance of infection.

Treatment of infected animals, particularly if the disease

is of some standing, is not very successful. Most efficacious is a proprietary copper preparation (Bengen & Co., Hanover) administered in three intravenous doses, eight days being allowed between injections. In conjunction with this copper sulphate, " licking stones " should be placed in the manger or other accessible place.

This copper solution also gives good results in young horses, affected with chronic disturbance of nutrition, gastro-intestinal catarrh and anæmic and debilitating diseases.

J. H. M.

[**Reports of the Fifth Meeting of the Veterinary Surgeons concerned with the combating of the Diseases of Breeding Stock**. *Reports and Discussions on Sterility*. (*B.T.W.* 1930. Nos. 1-4.)]

The conditions in Würtemburg.

Sterility in mares calls for treatment only in the studs, and abortion is practically limited to the non-infectious type.

Sterility in cattle is widespread, as in other countries. One veterinary surgeon was of the opinion that nutrition and constitution were important factors concerned. Mineral metabolism is of great significance in fertility, and lower fertility occurs more in winter than in summer; also neglect of hygienic requirements impairs the constitution.

Sterility in pigs and sheep is of little or no importance.

The speaker drew attention to the good results that are obtainable by the co-operation of practitioners and the provincial state institute.

Prof. Dr. Miessner (Hanover) gave the following statistics.—Sterility in the mare: 1,764 mares examined. Chief cause of lack of fertility was diseases of the uterus. Good results were obtained by delaying copulation in the first days of œstum and the administration of 2-3 grams of pot. iodide daily for 14 days.

Sterility in the cow: 209,084 animals were examined and treated. Ovarian and uterine diseases were about equally frequent. Sterility in abortion areas was not greater than in abortion-free areas. The causes were adiposity and malnutrition in some cases. For treatment, various hormone preparations were used with success, *e.g.*, ovary plantation. In two cases of abortion in pigs there was diagnosed from blood examination an infection by *Bact. paratyphi abortus equi*; and in two others a *Bact. abortus* Bang infection.

Prof. Dr. Walther, speaking on vitamins and the effects on an animal's constitution that lack of them causes, said that it was erronous to suppose that all animals of one species react identically to a diet deficient in vitamins. Actually it has been found by research workers that certain strains react more than others. By inbreeding mice, two particular strains were produced that behaved very differently to the identical diet, and when food deficient in Vitamin A and B was given, one family survived twice as long as the other. More valuable information can be obtained from observations of the effects of diet poor in vitamins than from one totally lacking in vitamins.

Ds. Stockklausner drew attention to the importance of mineral matter for reproductive ability and growth of young animals. As regards cattle, there is no or little fear of mineral deficiency so long as they have access to pasture or to good hay and roots while confined in stalls. Milking cows are most liable to show ill effects owing to their daily heavy drain of mineral matter (7·4 grams in each litre of milk secreted). With regard to ovarian cysts and persistent corpora lutea as causes of sterility, might not these conditions themselves be due to endocrine system disturbance and mineral matter deficiency?

Deficiency in Vitamin D might be the cause of insufficient resorption of mineral matter, so that the mere giving of various inorganic salts is quite empirical and no security that they are all being taken into the body system. Similarly, the empirical administration of foods supposedly rich in vitamins was quite likely, particularly at the hands of farmers, to give disappointing results: for one thing, there is no method of standardisation of vitamin content, therefore dosage is a difficult matter.

Dr. Frei, Zürich, mentioned the necessity of iodine for fertility and functional ability of young animals.

Another member stated that ovarian cysts most commonly occur in fat animals (sterility of overfeeding).

J. T. E.

[**The Technique of Intratracheal Injections in the Treatment of Large Numbers of Young Bovines**. Neuwirth. *Weiner Tierätz. Monatsschr.* Jan. 15, 1930. Vol. 17, No. 2. p. 67-68.]

The operator stands on the right hand side of the animal, an assistant holding the head. The hair is clipped over the trachea about the middle of the neck and the skin painted with iodine. With the left hand the operator grasps the trachea with the thumb on the right hand side and the fingers on the left, pressing them in until they nearly meet. An assistant then hands him a pair of hoof-testing pincers and with these he grasps the trachea previously held by the left hand. The pincers go right round the trachea. The handles of the pincers are then firmly held by an assistant. The idea is to relieve the operator of the fatigue of grasping the trachea and holding it steady by hand while the injections are being made.

The author recommends the injection of 7 c.c. of 2 per cent. solution of creolin in water, with a repetition of the injection a few days later. It is important in making the solution that the water be boiled and then cooled down (no special temperature is given) before the creolin is added. If the creolin be poured into hot water small drops of creolin form and a proper emulsion is not obtained. The injection of such drops of creolin may produce irritation later.

When the canula is inserted the animals generally make a reflex swallowing movement which is followed by a cough. It is advisable to use a canula with a lancet point because there is less risk of it becoming obstructed if a tracheal ring should be perforated.

A. L. S.

Agricultural Research.

The Ministry of Agriculture and Fisheries is prepared to receive, not later than May 15th next, applications for grants in aid of scientific investigations bearing on agriculture to be carried on in connection with a University, University College or other approved Institution or Society in England and Wales during the academic year commencing October 1st, 1930. The conditions on which these grants are offered are set out in the prescribed form of application (A53/T.G.), copies of which may be obtained from the Secretary, Ministry of Agriculture and Fisheries, 10, Whitehall Place, London, S.W.1.

Reviews.

[**The Blood Picture and its Clinical Significance.** Professor Dr. Victor Schilling. Translated and edited by R. B. H. Gradwohl, M.D. 7th and 8th Revised Edition. 44 illustrations and 4 colour plates. pp. 400. London: Henry Kimpton. 1929. 42s.]

This book is a valuable collection of modern hæmatological thought. The contents are divided into four sections.

Part I.—Technique.—Unfortunately the author gives little that is fresh in hæmatological methods. The most interesting paragraphs are those dealing with the "thick drop" method of smear preparation, Vital staining, and the "Guttadiaphot"; the latter being a new and interesting method devised to determine the pathology of the blood by allowing drops of blood to be absorbed on pieces of coloured paper, and afterwards noting the character of the spots so formed. (This has so far not been of recognised use in this country, but is certainly worthy of trial.) Having prepared a blood smear, Schilling labels it by scratching the name of the patient and the date across the smear; this is hardly to be commended, since the use of a "diamond" obviates all unnecessary mutilation of smears.

Part II.—Theory. Morphology and Division of the Blood Picture.—Schilling is particular to emphasise the importance of knowing the value of generative and regenerative blood changes, but his explanation of these factors in some parts of the book is none too explicit.

The author has advanced a new, modified theory as to the origin of the blood platelets. "According to this theory the blood platelet itself is the entire, modified nucleus of the younger erythrocyte, partly detached, and becoming free only in the circulation." If this be accepted as true it is peculiar that we have no platelets in the Aves.

Many paragraphs are devoted to pathological erythrocytes in the blood picture; some, however, are insufficiently practicable to be of real clinical value. His account of the Anæmias is good.

In the classification of the leucocytes it is unfortunate that the translator has used the terms "Rod," "Staff," or "Stab" to describe the deeply-indented metamyelocyte, for the same cell has been popularised in this country for some time past by Piney as the "Band" form.

Much space has been devoted to the "Nuclear Shift of the Neutrophiles," and although this is perfectly justified it is a pity that Schilling makes perfectly clear his antagonism to Arneth who, over 30 years ago, first attempted to classify the "polymorph" on the basis of nuclear configuration.

A very interesting chapter is devoted to the "Blood of the Child," detailing the striking changes which present themselves from birth to maturity.

Parts III and IV.—These are devoted to the clinical use and application of blood pictures, with selected examples. They occupy over 120 pages and need very careful examination.

Schilling has utilised each aspect of leucocytic hæmatology in his "Hæmogram." Special blood charts are printed and columns arranged for every type of white blood cell in addition to the total count and notes on the "Thick Drop." The data thus obtained are analysed and so great assistance is rendered in the diagnosis and prognosis of disease conditions.

The author has realised that to be able to recognise the earlier forms of the neutrophilic leucocyte is to obtain an indication of the activity of the bone marrow, and so he subdivides the unsegmented polymorphs into three classes, namely: Myelocytes, "Youngs," and "Staff," "Stab," "Rod," or "Band" forms. Added to these in the "Schilling Count" are the usual segmented polymorphs. Of the total white cells about 67 per cent. are polymorphs, and of these about 4 per cent. "Bands." Where infections are present numerous early forms appear, and Schilling has devoted much of his experimental work to investigating and explaining these changes.

In general the book is good; to students of hæmatology it is necessary in order to study "Schilling's Count," and to sift out those facts which only a man of the experience of Schilling can introduce. It is disappointing, however, to read the first part on technique and find so little that is neither new nor ingenious.

The illustrations and colour plates are good, but one would appreciate a better representation of the Monocyte than that given on Plate II.

The book concludes with 250 continental references to the several branches of hæmatology.

The translator is to be congratulated on the success which has attended his arduous task.

W. P. B.

[**Clinical Atlas of Blood Diseases.** A. Piney, M.D., M.R.C.P., and Stanley Wyard, M.D., M.R.C.P. 36 illustrations, 32 in colour. pp. 99. London: J. and A. Churchill. 1930. 12s. 6d.]

The authors and publishers are to be heartily congratulated upon the production of this very necessary text book. No British book on hæmatology has previously catered for the clinician with such efficient and beautiful illustrations. Mr. J. R. Ford, the artist, deserves special mention for his painstaking efforts.

In this volume the authors have tried to give a clear and very concise account of the blood findings, synonyms, symptoms, diagnosis, pathology, pathogenesis, prognosis and treatment of the many "diseases of the blood," at the same time supplying a vivid colour picture of the characteristic blood features.

The first eight illustrations depict the development of the blood cells from the early marrow and lymphatic "mother" cells as far as the blood mature cells. In doing this they convey in an extremely simple manner to the ordinary student a clear account of blood genealogy. The Monocyte (Plate I) is here illustrated as possessing a rather "blobby" nucleus, instead of the typical linear arrangement of the nuclear basichromatin, and in Plate V the picture is again unsatisfactory because it possesses too-marked a honeycomb appearance.

Then follow eleven plates dealing with conditions involving the red cell mechanism, most striking being the account of pernicious anæmia (including a plate on reticulocytes), a plastic anæmia, and chronic plumbism. The last-named condition should be of great interest to all veterinarians who have interest in the legal aspect of cases of lead

Branch Report.

Special Meeting of the Scottish Branch, N.V.M.A., at Perth.

Scheme for the Eradication of Bovine Tuberculosis.

A meeting of the Scottish Branch, N.V.M.A., was held in the Station Hotel, Perth, on Saturday, February 1st, 1930, under the Presidency of Mr. W. Nairn, Blairgowrie.

The members had an informal luncheon in the Hotel prior to the meeting, which was convened at 1.45 p.m.

The following gentlemen signed the Attendance Book :—

Members.—Mr. W. Nairn, President; Messrs. J. Macfarlane, D. Brown, James F. Taylor, P. Meikle, Donald Campbell, James McDougall, S. G. Abbott, W. Gardner, Jas. Henderson, H. M. Wilson, Professor R. G. Linton, Messrs. Jas. Bishop, W. M. Ferguson, J. N. Ritchie, Geo. T. Boddie, Professor W. M. Mitchell, Messrs. A. Spruell, J. Gilray McGregor, R. G. Anderson, Jas. Macfarlane, A. Douglas, Dr. A. W. Whitehouse, Messrs. J. Brown, J. Gibson and W. C. Miller (Hon. Secretary).

Visitors.—Messrs. E. Clark, N. Renfrew, A. Spruell, Junior, D. S. Rodger and J. W. Burgess.

The Secretary read an excerpt from the Minutes of the last meeting which had been printed in the *Veterinary Record*. These were approved.

Apologies for absence were intimated from Dr. O. Charnock Bradley, Professors J. Russell Greig, A. Robb and D. Imrie, Messrs. A. Gofton, E. J. H. Sewell, H. Begg, W. Scott, Majors A. Baird and Graham Williamson, Messrs. Jas. Anderson, T. M. Inglis, Laurence McLaren, W. Wallace Peggie, Dr. T. W. M. Cameron, Messrs. Geo. Weir and H. MacAlister.

Delegates to International Congress.—A letter was read from the Secretary of the Eleventh International Veterinary Congress asking for the appointment of not more than two delegates from the Scottish Branch. The President and the Secretary were appointed to represent the Branch.

Scheme for the Eradication of Bovine Tuberculosis.

The President briefly indicated that the purpose of the meeting was to receive the reports of the constituent Divisions of the Scottish Branch on the West of Scotland Division's Scheme, which had been circulated and considered subsequent to the Branch Meeting at Ayr last year.

He called upon the Secretary to read these reports, which were as follows :—

(i) *From the North of Scotland Division.*—" That whilst we are all agreed that the scheme is a very excellent one, we feel that it is rather too drastic as is stands and that something less ambitious might be more satisfactory, at any rate for a start.

" The feeling here is that too little regard has been paid to the nature of the herds in different parts of Scotland. For instance, in Aberdeenshire practically all the herds are ' flying,' so that to attempt a scheme of eradication in these herds would be more or less futile, since they change so quickly. Finally, the North Division members are prepared to back any scheme put forward wholeheartedly."

(ii) *West of Scotland Division* being the originators of the Scheme, it was taken for granted that the members of the West Division fully endorsed it.

(iii) *Ayrshire Division.*—"Agrees to support the scheme."

(iv) *Dumfries and Galloway Division.*—This Division made certain emendations in the arrangement of the scheme, but agreed to its general principles, and offered its support.

(v) *Scottish Metropolitan Division.*—" The Division, while offering certain criticism, chiefly of detail, agrees with the principle of the scheme, and agrees to support it."

The Secretary, in accordance with instructions (proceeded the President), had forwarded a copy to the National Farmer's Union of Scotland, and to the Scottish Chamber of Agriculture, for their information. Both these bodies expressed themselves as in favour of the advisability of making some attempt to eradicate tuberculosis from cattle, and offered their hearty support and co-operation.

Resolutions were read from certain of the English Divisions. A copy of the scheme had been sent to each of the English and Irish Divisions for their information, and a number of the Divisional Secretaries had communicated the result of their deliberations to the Branch Secretary. These were heard with interest.

The President intimated that certain gentlemen had very kindly agreed to read short addresses dealing with the possibilities of the scheme as they conceived them, applied to their own districts.

Before calling on these gentlemen, he would ask Major McGregor, of Stirling, to speak generally on the scheme.

Major J. Gilroy McGregor (Stirling).—As one of the Committee of the West of Scotland Division which drew up the Scheme for the Eradication of Bovine Tuberculosis, under discussion to-day, it is very gratifying to observe, from the columns of the *Record*, the interest which the scheme has evoked in veterinary societies throughout the length and breadth of the land. There is also to be noted an incident of the present week which is of more than passing interest. On Thursday evening, Dr. Wright, of the Hannah Research Institute, broadcasted a special talk to Scottish Farmers, and chose as his subject " Eliminating Tuberculosis in Cattle." For those who did not hear the talk, I may say that it was excellent propaganda. He acknowledged that the problem was one for the veterinary profession and, in concluding, referred to the experi-

* Received on March 20th.

poisoning in animals. Here we have a fairly definite blood picture which should prove of great value in establishing whether an animal is suffering from poisoning by the metal lead.

The last half of the book deals with diseases of the leucocytic variety.

Myeliod leukæmia is well portrayed, as are also Hodgkin's disease, and carcinoma of the marrow (secondary).

A glossary is present at the front of the book which is probably the most useful place for it, since modern hæmatology is full of new and difficult names.

W. P. B.

ment which is at present being carried out in North Ayrshire, and also to the fact that the veterinary profession was at present engaged in considering a scheme of eradication.

Present circumstances are most propitious for the consideration of the question. Agriculture, and I use the term in its broadest sense, is in a depressed state, and its leaders are looking around for a solution to the problems that confront it. Had agriculture been prosperous during the past few years it would have been futile to point out the losses that are caused by preventible diseases in animals. One has only to read the symposium which occupies a leading place in the current number of the *Scottish Journal of Agriculture* to realise that this question, the eradication of bovine tuberculosis, is exercising the minds of "those whose prominent association with agriculture entitles them to speak with authority." It is not claimed that a solution to this problem would solve all the difficulties that press so heavily on agriculture at present. As the Secretary of State for Scotland says in an introduction to the article I have mentioned, "no single specific remedy is available," but, he continues, "the Government has already, in various ways, given practical proof of its desire to help, and whatever further action it is practicable for it to take, will be taken." I believe the veterinary profession has a contribution to make towards the solution of two of the greatest scourges that afflict our herds to-day and cause great losses to agriculture, I refer to tuberculosis and abortion. While we can assist by our advice, it is the live stock industry itself which must make the demand for the better control and ultimate elimination of these plagues. The Government may assist by giving financial assistance, and the profession by giving sound advice; but if the industry does not bestir itself in the matter neither the Government nor the profession can save it.

We know that the two organisations which represent agriculture in Scotland—the Scottish Chamber of Agriculture, and the National Farmers' Union of Scotland—are alive to the question which is now occupying our attention, but there are many stock owners who have no connection with either society and are outwith the scope of their influence. I feel it is here that we, as a profession, can play an important part. If each veterinary surgeon in his practice were to become an active worker in the campaign, then the success of the movement for eliminating tuberculosis would be assured. Think of the opportunities that present themselves to practitioners in the ordinary course of their duties. In our own ranks we form an organisation covering the whole country. In Scotland, according to the register for last year, there were 300 practitioners; yet in a recent speech the Under-Secretary for Scotland announced that the number of herds in Scotland, licensed for the production of tuberculin-tested milk, was 101. These figures do not reflect much credit on us as a profession.

At the Branch Meeting held in Ayr last September, I expressed my views on the scheme under consideration, and do not propose to repeat them here. Those of us who drew up the scheme are well aware of its imperfections; we have brought it before the Scottish Branch to focus attention on the subject and serve as a basis for discussion. Your criticism is invited; if constructive, it will be welcome; if destructive, then the critic should be prepared with an alternative plan. The menace of tuberculosis in our herds is a challenge to the profession, and the country looks to us to accept the challenge and free it of the menace.

Mr. Campbell (Rutherglen) said it was his duty to speak of the scheme as it would affect, and be received by, dairy farmers in the West of Scotland. This made it unnecessary for him to deal with the compulsory sections of the scheme, since it was not suggested that compulsion should, in the first instance, be applied to commercial dairy farmers.

To find a proper basis for his theme he had to ask this root question, "Do farmers wish to have their herds freed from tuberculosis?" His answer to this was "Yes!" Why, then, did not more of them try to free their own herds by the only means so far available, the tuberculin test? There were several reasons:—

(1) The cost of testing.

(2) Some doubts existed among farmers as to the reliability of the tuberculin test.

(3) The certainty of a large proportion of reactors, with the difficulty and loss attending their disposal and replacements.

(4) The uncertainty of receiving adequate return for the trouble and expense.

Any scheme, to be favourably received, must meet, within reason, these points. He would take the points in their order.

(1) Cost of testing. Under the W. of S. scheme this cost would be borne by the public, as it should be, since eradication was primarily for the benefit of the public.

(2) Doubts certainly existed as to the reliability of the tuberculin test. The comparatively few failures of the test received far more publicity than the many successes. With strictly regulated manufacture of tuberculin and precise interpretation of results, anomalies would become much fewer.

(3) With a large proportion of reactors slaughter in the early stages would be out of the question. Arrangements for segregation should be as simple as possible. Not only winter accommodation, but separate grazing in summer would have to be provided. Even this difficulty need not be unsurmountable, and the Ministry would, of course, select suitable farms in applying the test.

In two matters the rigour of the printed scheme might be relaxed somewhat. One had to do with disposal of reactors. Pending the decision of the Ministry to slaughter, a man should be allowed to dispose of his reactors in the market as freely as untested cows were disposed of, most of which were potential reactors. The progressive farmer must not be handicapped in his business. The other matter was the marking of reactors. The marked cow would be at a disadvantage in the market as compared with the unmarked cow, which, nevertheless, might be the more heavily infected of the two. At a later stage, however, marking would be necessary.

Replacement of reactors was purely a matter of administration. It was only necessary to have an adequate supply of non-reactors before removal of reactors was begun on a large scale.

(4) In the matter of return for outlay a national scheme differed essentially from an individual attempt at clearing a herd. The cost was being borne by the nation, and

so the question of added profit for the individual did not arise.

Concluding, Mr. Campbell said that the answers to the questions he had raised seemed to him strongly to support the proposals of the West of Scotland Division.

Major A. Douglas (Ayr): I have been asked, in the first place, to speak of the draft scheme as it would affect the dairy farmer in Ayrshire. This scheme would offer the owner free testing, with compensation for reactors up to a £50 valuation, and temporary buildings for the isolation of reactors where the numbers are too great to permit of immediate disposal; the scheme to deal first of all with selected herds and later with areas.

Having had its genesis in the West of Scotland, it is not surprising that such a scheme is peculiarly suited to the dairy herds in that part of the country. The points in favour of the application of such a scheme to Ayrshire are (1) that practically all the cattle are dairy animals, among which it is the practice to segregate the calves at birth; (2) fully 60 per cent. of the herds are self-supporting; (3) housing conditions are good; (4) very few cattle are imported except fat cattle for immediate slaughter and (5) there are several areas in the county in which the percentage of reactors will most probably be low.

If such a scheme were adopted I believe that one-third of the owners would apply at once to have their herds tested, and another third could be got to come in without much persuasion.

Regarding the scheme itself, what strikes one particularly in studying it is that it is a strange mixture of detail and generalisation, and in drawing up a scheme of this kind I think it would have been better to have submitted the bare outline of the scheme or drafted the scheme in full detail. As it is, one wonders why some points have been dealt with in detail and others in quite a general way. As the scheme is only partly given in detail, I would suggest that the "musts" and "shalls" should be replaced by "shoulds."

I regret that more consideration has not been given to the possibility of extending the Tuberculosis Order, as it appears to me that under the Diseases of Animals Act, 1925, the Minister could issue an order embodying a scheme for the eradication of tuberculosis. Under this Act the Minister repays to the Local Authority three-fourths of the compensation paid out of the local rate for the slaughter of any animal in the case of the existence or suspected existence of tuberculosis.

This Act, of course, invisages the administration of any such Order by the Local Authority, and in the draft scheme the part to be played by the Local Authority is far from clear.

In submitting a scheme of this kind for the consideration of a Government Department, one of the first things that would be asked would be: What is to be the cost of such a scheme? It is, of course, stated that an annual appropriation is asked for, which may be large or small, but the point is, how many herds will it be possible to deal with for, say, each £1,000 of the grant, or, on the other hand, can any estimate be given as to the probable average cost of clearing a herd?

There is another point in connection with the finances of the scheme which is not clear, but was made clear by Dr. Whitehouse at Dumfries, where he is reported as having stated that no part of the cost of the scheme should be borne by the owner. As a ratepayer I must disagree with that, as I am not at all certain that farmers are altogether free from responsibility regarding the widespread infection which exists in some herds, and again I feel it would be a mistake to relieve the owner of all cost and would lessen his interest in the work, while, considering the progress made in recent years by owners in clearing their herds without any financial assistance, the bearing of some reasonable share of the cost would debar very few from coming into the scheme.

There is another point which, I fear, will never meet with government approval; that is the proposal to dispose of certain reactors outwith the herd or area.

About two years ago I submitted a scheme to the Ayrshire Local Authorities, and the Department of Health indicated very clearly that no scheme would be approved which permitted reactors being sold into other dairy herds. Personally, I think the Department's view is rather a drastic one, and it certainly killed any hope I had of getting my scheme adopted by the Ayrshire Local Authorities.

I would suggest that the scheme should either be elaborated and full details given of the scheme which we consider necessary to deal with the problem, which would be a very difficult job, or strip this draft scheme of all unnecessary detail and put forward to the Government a bare outline which would amount to something like this:—

Herds of willing owners should be tested free, and either compensation paid for reactors or, alternatively, if considered desirable, isolation of reactors might be practised, while in selecting herds for testing preference should be given to pedigree or high-grade herds and to herds so situated as to form the nucleus of a free area.

To this might be added that when over a certain percentage of herds in a specified area are declared free, the advisability of applying powers of compulsion to the remaining herds should be considered.

Mr. A. Spruell (Dundee): I have been asked to indicate how I think the scheme would be received by commercial breeders and feeders in the East of Scotland. I can only speak of how I think it would be received in my own area of Forfarshire and Fifeshire in which, on our rich arable land, at least 75 per cent. are feeders almost wholly of Irish two-year-old store cattle or bulls. The only possible mode of dealing with such cattle under our proposed scheme would be tuberculin testing of all Irish stock by veterinary officers at all ports of export or import or by a combination of both. This precaution, if adopted and enforced, would ensure a minimum of Irish cattle suffering from tuberculosis being imported into Scotland. As the life of these store cattle (two-year-olds) in Scotland does not exceed six months, this single test would suffice and the fee charged at the port for testing and the few days' keep would be a mere bagatelle on the price of the cattle (probably 5s. per head) which would be cheerfully paid by the buyer, or which could and would be added to the price if the seller had to pay it. After all, it is a very cheap insurance for six months and would obviate the present dumping of tuberculous Irish cattle into Scotland.

Our commercial dairy and breeding stock is, again, at least 75 per cent. Irish cows or heifers or crosses from that stock with Black Polled or Shorthorn (tested) bulls.

If this testing on importation or exportation could be carried out it would insure a constant influx of clean cows and heifers. Most of these cows in city dairies are fattened off at the end of their milking period and would have little chance of becoming open tuberculous cases in that time. Young cows or breeding heifers (tested on entry to Scotland) would be automatically retested in Accredited or Application premises.

Speaking for my own area, this constant renewal of our stock by tubercle-free animals would be an incentive in itself to many enlightened dairymen and farmers to try for an absolutely clean herd, and where there are already Accredited Herds the assistance offered by this scheme, backed by the Ministry and compensation, will see a large increase by application as soon as its aim is understood.

Our present system of inspections by County Veterinary Officers and part-time Veterinary Inspectors has undoubtedly reduced the number of cows giving tuberculous milk and animals suffering from chronic (tuberculous) cough with emaciation in our herds and dairies. If the Tuberculosis Order was extended to include and enforce notification of chronic cough (*without emaciation*) and diarrhœa, and Inspectors had power to seize and slaughter all such open cases of tuberculosis where tubercle bacilli could be demonstrated in sputum or fæces, or where such suspected animal reacted to the test (that is to say *open cases*), and where rigid disinfection was enforced after such seizure and slaughter, I feel confident that tuberculosis would speedily decrease. English cows and cattle should be treated in the same way as Irish and should be tested before entry.

We have got to accept the fact that we have large numbers of tuberculous stock in Scotland, but if we continue to be a dumping ground for other countries we can never eradicate tuberculosis unless in isolated areas. If these two main routes of re-infection were closed then we could gradually put our own house in order, by Associated Herds, by application, and perhaps in the distant future by compulsion.

Mr. W. Wallace Peggie (Biggar), being unable to be present, sent the following communication, which the Secretary read :—

"Having been asked to give my opinion as to how the proposed Scheme for the Eradication of Bovine Tuberculosis would affect the cattle owners of Lanarkshire and the South of Scotland, one finds that before any sensible and practical answer can be given it is necessary to examine the Scheme very thoroughly and ponder carefully over its bold and somewhat far-reaching scope. The desirability of eliminating bovine tuberculosis from these Islands is a matter the importance of which no right thinking member of the veterinary profession can confute. Our thanks are justly due to those who have spent considerable time and thought in once again focussing our attention on what they consider a highly important problem for the veterinary profession. I am of the opinion, however, that the scheme as suggested to us is too idealistic to be practical.

Criticism must always be constructive or destructive. My first impression, therefore, on going carefully over the scheme is that it appears to be too much veterinary and too little agricultural, or, in other words, the promoters appear to me to have overlooked the all-important fact that we must have the unanimous and whole-hearted support of the agriculturalists of the country if we are to hope for any measure of success. I venture to say we are not justified in embarking on a scheme of this dimension which undoubtedly must and would interfere with the livestock industry of the country, the compensation for such interference being very little more, at least for many years to come, than considerable increase of work for the veterinary practitioner. One feels that a combined conference with stock owners, whole-time veterinary officers, Ministry of Agriculture officials, and practitioners, might have been productive of many valuable suggestions as to how such a scheme could have been undertaken with the minimum of interference with normal stock-raising and the movement of livestock. There is a point I would raise here which has struck me as being somewhat patent in this scheme; that is, the marked restricted use which is to be made of the whole-time veterinary officer. I would consider that to be a fatal mistake for the success of any Tuberculosis Eradication Scheme. The employment by any county of a tactful and efficient veterinary officer is productive of a great amount of good to any agricultural community. We, as a profession, ought, I think, to welcome the ever-increasing number of county and municipal authorities who are making appointments of whole-time veterinary officers. I would go the length of saying that as their numbers increase so will the incidence of bovine tuberculosis diminish.

I seem to read between the lines of this scheme before us that there exists in the minds of the promoters the fear that unless something drastic is undertaken soon the work of eradicating tuberculosis will be taken out of our hands and placed elsewhere, and the funds which might be granted might also find other channels. You are all no doubt aware that a scheme on somewhat similar lines is being put in operation in a selected area in Ayrshire under the supervision of the Hannah Institute, and which, I think I am right in saying, has the co-operation of the Rowett Institute also. This work is being carried out by two members of the veterinary profession and has the support and co-operation of the County Veterinary Officer and local practitioners. The result of this modified scheme of localised tuberculosis eradication will, I am sure, be awaited with considerable interest by all concerned. Might it not show us that it would be wise to make haste slowly with any such enlarged scheme as the one at present before us?

Turning to the scheme in detail, it appears to me that great and almost unsurmountable difficulties present themselves in regard to animal housings as they exist to-day in this country. It must surely be recognised that buildings which have for long years housed tuberculous stock must present a serious problem as regards efficient disinfection. In my opinion little short of burning the building would be successful. Again, there is the problem of infected pastures, which must present a great difficulty. The suggestion of the use of temporary wooden structures is fundamentally unsound in all its aspects and is calculated to scare any practical stock owner, be he laird or tenant. No proper system of drainage could be carried out, and the increased risk of fire cannot be reasonably overlooked. I had understood that the question of branding or marking reacting cattle was the subject of very considerable discussion by the veterinary profession some time ago and

was ultimately discarded as being totally unacceptable to stockowners. I have to admit, also, that the idea of the Ministry of Agriculture being given powers to dispense with the services of a veterinary practitioner, should he not be acceptable to them, would not be conducive, in my opinion, to the production of local team work in any district. We cannot overlook the accepted difficulties arising from the question of marketing tested stock in markets where isolation quarters are not available, which is the case in my auction marts to-day. From my observations it might be thought that my criticism was entirely destructive; this is really not my intention, it is more to issue the warning 'Gang Warily.' Might I be permitted to propose to the meeting the following Resolution: 'That the Scheme for the Eradication of Bovine Tuberculosis, as proposed to us by the West of Scotland Division, be subjected to considerable revision, and to achieve this end co-operation be sought from the various interested bodies, namely, the dairy farmers, governmental authorities, whole-time veterinary officers, and veterinary practitioners. Meanwhile, solicit the aid and co-operation of all county agricultural organisers to forward the crusade against bovine tuberculosis by bringing to the notice of all stock owners the advisability of joining the ranks of voluntarily-produced tubercle-free herds. To this end it might be suggested that some measure of compensation might be made for reactors to those farmers who are progressive and see the necessity of helping themselves.'"

The President said: This special meeting of the Scottish Branch has been called to consider the scheme for the eradication of tuberculosis proposed by the West of Scotland Division.

I am sure you will wish me to congratulate the Division on being the first organised body in the profession to submit a definite scheme to public criticism.

The scheme proposes an effort to stamp out the plague. Hitherto the difficulties of the problem have appeared too overwhelming, but with the example of America before us there seems to be more hope of a successful attack than previously and we must admit that sitting with folded hands bemoaning our fate takes us nowhere. While the Tuberculosis Order and the Milk and Dairies Order are no doubt productive of good, they neither lighten the burden of agriculture to a marked degree nor they do give complete protection to the general milk consumer.

The problem is an important one for the veterinary profession; it is more so for agriculture, but most of all for the general community.

The eradication of the disease will remove the danger of infection from bovine sources, but I think the indirect benefit will have more far-reaching results, as the increased confidence in the safety of milk will lead to a much greater consumption, with great benefit to the national well-being and incidentally to the dairying industry. I feel sure that in any effort the veterinary profession will be found ready to guide and serve, I hope, with early success. I need not dilate further on the general aspect of the question as our programme is long. We have Dr. Whitehouse with us, and as he is one of those responsible for the scheme I will ask him to amplify the outlines published.

It has occurred to me that as this scheme is of necessity a voluntary one it can only attack the problem in localised areas; it would be of considerable advantage to the movement if some modified effort could be made throughout the whole country.

The districts which will least readily adopt the scheme are the districts where the incidence is heaviest.

We know that for one animal infected through its mother's milk 30 are infected by contact, and I thought we should use this knowledge and impose some ample sanitary measure making it an offence to keep calves in buildings with their dams or adult cattle. Where calves are suckled the risk from suckling is not great if the calves are not allowed to remain in the byre afterwards.

It also might be feasible to apply the test to these calves when six months old and thus remove the infected at the earliest moment.

By such a plan we would be raising a cattle population with much lowered incidence of tuberculosis, and the effort when it became compulsory in these areas would produce less disturbance than otherwise. I submit the suggestion for your consideration and would ask you to express your opinion as to whether it is practical politics or not; if you think it is, then it might be incorporated as a supplementary clause.

General Discussion.

Mr. James Bishop (Perth) said that he thought the scheme should be confined to milk producers and dairy farmers. There was no danger from tuberculous beef; milk was the source of trouble to man. He thought that it would be easier to carry out in the self-supporting dairy herds, than in the flying stocks in the East of Scotland, the animals of which could not very well be tested. In his view testing at the ports was not possible; wharfage accommodation was too little, both on this side and in Ireland. Bullocks could very well be tested; weaned calves were sometimes difficult enough. He considered that many Irish cows were healthy when they left Ireland, but contracted the infection on the journey over, and became "piners" in consequence. These "piners" were never kept by the commercial people; they know too well that it paid them better to get rid of them at once.

Mr. Bishop expressed the opinion that if the scheme were to be confined to dairy cattle in the first place, everyone would support it.

Dr. Whitehouse (Glasgow) said that one thing which had impressed him had been the unintelligibility of the scheme to the majority of those to whom it had been submitted.

They had heard many remarks and resolutions from both England and Scotland, and he felt that those who had so severely criticised it simply had not understood it. Most of the criticism was not at all rational. It was necessary to recast the scheme so that it could be more easily understood.

The chief failure had been to understand that the scheme was voluntary at first; they could not very well condemn a voluntary scheme as drastic—that was a word which had been used.

So far as figures went, at a guess they estimated that the cost over all would be from £8-£10 per head of cattle. But much of the expense would be borne by the voluntary people in the first place.

Then he thought that there should be some provision

made for those who were eager to help on the scheme to do so, possibly by way of the Local Authorities.

He sincerely hoped the scheme might be drawn up afresh in such a way that it could be more easily understood.

Professor R. G. Linton (Edinburgh) said that he thought all would agree that tuberculosis must be eradicated. He would like to congratulate the West of Scotland Division on its attempt to bring forward a scheme, even though it was not yet perfect. He would like to ask, "Was it essential to have the scheme complete"? He would like to see it pass on to the next stage. He emphatically disagreed with those English Divisions which had suggested that the time was not opportune. If anyone gave careful consideration to the question of tuberculosis, he could only conclude that the time for eradication was most opportune now. More livestock breeding was going on than previously. Grass was being laid down all around and more young stock was being raised at home instead of being imported from Ireland.

He did not agree with Mr. Spruell that testing at the ports was feasible. He did not think it would be possible. The reactors could not be slaughtered and sold for food as was done in Germany, for instance. He had given the Tuberculosis Order carefui consideration and did not think that any speeding up of it would do any good, or make any very marked change. Absolutely new regulations were needed to deal with this scourge of tuberculosis. Finally, he was almost sure that tuberculosis could not be eliminated until tuberculin was rigidly controlled.

Major R. G. Anderson (Kirkcaldy) said that this scheme under discussion was called a British scheme, but in view of the opposition from some of the English Divisions whose resolutions the Secretary had read, would it not be better to think of the scheme as Scottish only? He thought that to be really effective any scheme should produce results at once, and so he did not agree with the voluntary system, which would not produce effects except in the best districts. Any scheme of this nature should have an agricultural appeal, as well as an appeal to the milk-consuming public, and it should be a feature that the inducements were such as would encourage many cattle-owners to go in for eradication of the disease at once. He inclined to agree that it should be applied to the dairy cattle first. The lives of beef cattle were short, their freedom was restricted and their fate was an early death. Tuberculosis in them did not really matter from the public health point of view. He would suggest that beef cattle be excluded from the scheme in the meantime.

So far as Irish cattle were concerned, it was his experience in Kirkcaldy that cows were free when they came over, but they contracted infection after arrival. The isolation of reactors was really an acute problem. If a dairy farmer had to keep two classes of cows he would have to face the problem of the disposal of the reactors' milk. The public would get to know that some cows on his place were isolated and would not want to buy their milk, so that any scheme which entailed isolation of reacting cows for any considerable period of time would have to be condemned. Dr. Whitehouse had said that the scheme would take 50 years to complete the eradication of the disease—then he would say it was really not worth consideration. It must be so adjusted that it would produce its effect sooner. He would put it this way—What is the average life of a dairy cow? Say it was six years. Accordingly, any scheme should not take more than six or eight years to complete—that was so that the next generation of dairy cows would be free. That would necessitate some form of compulsion at the outset of the scheme, which could be made operative after a short voluntary period.

Mr. Henderson (Broughton) thought they should compliment the originators of the scheme on their courage. When he was an inspector in Edinburgh he had had opportunity to examine a very large number of dairy cows of Irish origin, and was struck by the comparative infrequence of tuberculosis in them. He was of the opinion that those which got it, got it in this country. He would like to see the feeding farms left out of the scheme in the meantime, and all the energies of the profession and the monies at the disposal of the authorities concentrated upon the dairy farms, where the disease was really bad.

It had been said that there was about 40 per cent. of all dairy cattle infected; suppose they took that figure—it meant that a very great deal of milk would be contaminated with tubercle organisms. There was practical proof of that to be seen in the action of leading pig-buyers in Edinburgh, who would pay more for store pigs which had been reared without the use of skim milk, even though not so forward, than they would for milk-fed store-pigs. They knew the incidence of tuberculosis was far higher in milk-fed pigs than in the non-milk-fed ones. Figures from the Sick Children's Hospital of the incidence of tuberculous infection of bovine origin in children went to prove the same thing. He thought that the figure was 83 per cent. He really thought it would not be advisable to test cattle in Ireland, because the reactors were so few.

Mr. John Brown (Perth) remarked that he disagreed with the speakers who said Irish cows were free from tuberculosis, or nearly so. He had occasion, in his practice, to test a large number of Irish cows for his clients who wanted tubercle-free cows. The cows were only landed 48 hours before testing in most cases, and his experience was that to get three or four free cows it was usually necessary to test twelve. Sometimes only two out of twelve would pass. It was, he was sure, a mistake to consider that most Irish cows were free; they were not.

Mr. Spruell (Dundee) said that along with others he had had an opportunity of seeing large numbers of Irish cows slaughtered at Birkenhead recently, and had seen many cases of tuberculosis amongst them. He thought Irish cows would have to be tested in Ireland and only the non-reactors sent over.

Mr. Wilson (Cupar) said that in his experience English Cumberland-bred cows were as badly infected as were the Irish cows, and they also would have to be tested and those which passed ear-tagged. He had tested a large number of stirks and found a big proportion of them were already reactors even though recently arrived in Scotland.

Mr. J. N. Ritchie (Midlothian County Officer), said that in his own districts the rock on which such a scheme as this would be wrecked was not so much the cows themselves as the buildings. The tuberculin test was not everything; it was only a means of eliminating an animal. The premises which were usually heavily infected and difficult to clean and disinfect presented a more serious problem.

He thought more stress would have to be laid upon the disinfection of premises after the removal of reactors.

As a suggestion: could not the scheme be put into a skeleton form and forwarded to the administrative authorities for amplification?

Mr. D. B. Rodger said he would like to speak as a private individual who was greatly interested; not as an official. He felt the discussion had gone too fast. It would be better, he thought, to concentrate attention upon the foundation of more accredited herds. In Great Britain we had not yet even begun to crawl in the attack against tuberculosis. It was necessary to get many nuclei of clean accredited herds scattered over the country in the first place, and it was necessary that the profession should endeavour to encourage more dairy farmers to clear their herds.

America's figures were instructive; in one State in 1919 there was one accredited herd; in 1926, after adoption of the American eradication scheme, there were in the same State 25,000 herds clean; while in December, 1929, the number was 70,000 cleared herds. Figures corresponding with those were what we should have in this country—a large number of accredited herds. He also thought that the tuberculin test required consideration. More information was wanted concerning the intradermal test before it could be utilised on a large scale here at home.

Major R. G. Anderson thought the intradermal test was a nuisance. We really required a good, safe and reliable test which necessitated two visits only. He would like someone to pass an opinion on the infraorbital test. He had found it very good. Could the specification of the best test, based on expert advice, not be included in the scheme?

Dr. Whitehouse briefly explained that the scheme, as it stood, made provision for this point.

Mr. Rodger mentioned that he had seen the intradermal test done on the caudal fold in Canada and the United States, with great success. He thought the intradermal test, done in the caudal fold, was a most reliable test.

Mr. Geo. F. Boddie (Auchterarder) said that, in addition to the question of Irish cattle and Cumberland cows, another source of serious infection was the trade in cows from the Western Islands. Of the 28 cows he destroyed under the Tuberculosis Order last year, the number of Western Isles cows was greater than the number from other origins. If restrictions on Irish cows were going to be suggested, he thought that to be consistent it would be necessary to make similar provisions for these Western Isles cows.

Regarding a test, he was very pleased with the double intradermal, using non-tubercle broth on the other side as a control. It was far less laborious.

Mr. Jas. Gibson (Dundee) thought the meeting was getting away from the subject under discussion. The scheme was in front of them with all its deficiencies. He would propose that they send it forward to the N.V.M.A. as it stood.

Major Douglas thought that they should add a recommendation that, in view of the unsatisfactory views of the English Divisions, the N.V.M.A. were to take it as applying to Scotland.

Mr. D. Campbell (Rutherglen) opposed this restriction to Scotland. If the scheme was adopted it was, after all, voluntary, and if the English farmer did not want to apply he did not need to do so. Dr. Whitehouse had already emphasised the voluntary nature of the scheme earlier in the afternoon.

The President said that was the crux of the scheme—it was voluntary for 75 per cent. of those in an area. It was up to each farmer to decide whether he should apply to have his herd cleared or not.

He thought the discussion on the usefulness and applicability of the scheme had gone far enough, and he would now declare it closed. The next point to decide was the fate of the scheme. Should it be recast first, or should it be forwarded as it was to the N.V.M.A.? He would like the feeling of the meeting on these points.

Professor Mitchell proposed that a Sub-Committee be formed of representatives from each Division, to amend the scheme and refer it back to the Branch again.

Mr. H. M. Wilson seconded.

Major Douglas proposed an amendment that a Sub-Committee representative of each constituent Division of the Branch be formed with powers to amend the scheme and take such action as it deemed advisable.

Major McGregor seconded.

After some further discussion, Professor Mitchell, with the permission of his seconder, withdrew his motion in favour of Major Douglas's amendment as the substantive motion.

Further discussion followed, in which Major McGregor asked whether, after the amendments had been made, the members thought the scheme should be forwarded to the N.V.M.A. direct, or whether they should seek to secure the co-operation of the National Farmer's Union and the Scottish Chamber of Agriculture, which bodies, as they had heard, were more than willing to co-operate with them.

Mr. James MacFarlane thought they should seek the approval of the "National" first. Mr. Gibson and other members thought it would enormously strengthen their position if the co-operation of the N.F.U. could be obtained first. It was decided to leave the decision in the hands of the Sub-Committee, who had been granted the necessary powers, to decide this point.

Election of Sub-Committee.—The meeting then proceeded to elect the Sub-Committee. Professor Mitchell proposed that two members from each Division should be elected, together with the President and Secretary of the Branch *ex officio*. After discussion the members agreed to this.

The President then called for nominations from the five Scottish Divisions.

The following gentlemen were duly proposed, seconded, and elected to serve on the Sub-Committee:—

West of Scotland Division: Major McGregor, Mr. D. Campbell.

North of Scotland Division: President, Secretary, or their nominees.

Dumfries and Galloway Division: President, Secretary, or their nominees.

Ayrshire Division: Major A. Douglas, Mr. D. Brown.

Scottish Metropolitan Division: Mr. J. N. Ritchie, Professor R. G. Linton.

Scottish Branch: Mr. W. Nairn, President; Mr. W. C. Miller, Secretary; specially co-opted, Dr. A. W. Whitehouse.

Major Douglas proposed that five members should constitute a *quorum*. This was carried.

On the proposal of Professor R. G. Linton, the meeting

resolved itself into Committee and discussed certain urgent matters of interest to the profession generally.

THE MOREDUN APPOINTMENT.

Major McGREGOR, when the meeting was again constituted, said he wished to refer to the Congress of the "National" at Ayr last year. They would remember that it was announced shortly previous to the meeting that there was a suggestion before the Directors of the Animal Diseases Research Association to appoint a medical man to the post of Director of the Moredun Institute in succession to Mr. W. A. Pool. A meeting of Scottish members protested and sent a resolution to the "National." The N.V.M.A. had been successful, and, as they all knew, a veterinary surgeon had very recently been appointed. He thought it would be a gracious act for the Branch to make reference to this and record in its Minutes its thanks for the action taken by the N.V.M.A. to ensure the appointment of a qualified veterinary surgeon to the post of Director of the A.D.R.A.

The PRESIDENT said he was sure they would all heartily agree with Major McGregor's proposal, and he would like to add that when the message of thanks was conveyed the Branch should express its earnest hope that the appointment would mark the beginning of a period of amicable relationship and co-operation between the A.D.R.A. and the parent Association.

This was agreed to amid hearty applause, and the Secretary was instructed to forward the letter forthwith.

On the motion of the Secretary a very hearty vote of thanks was conveyed to the President for his conduct in the Chair.

The President briefly acknowledged his thanks.

WILLIAM C. MILLER, *Hon. Secretary.*

A Scientific Name for Ringbone.

Lieutenant Verne C. Hill, of the U.S. Army Veterinary Corps, writes in the current number of the Corps *Bulletin*:

"In the November, 1929, issue of the *Veterinary Bulletin* there was an announcement to the effect that the National Veterinary Association of Great Britain had offered the following resolution: 'That ringbone be defined as a phalangeal ostitis with exostosis partially or completely surrounding the pedal, coronary or fetlock joints, accompanied by arthritis.'"

As an answer to the invitation for comments, the following is suggested: We know that ringbone is some form of exostosis and where there is an exostosis, ostitis either is or has been present; hence, the latter term is rather superfluous. The old term "ringbone" is what one might call a layman's term, but yet is a commonsense one and is quite descriptive, as it is applied to a pathological ring of bone partially or completely surrounding a normal bone. This exostosis may also involve other parts of the affected bone, but almost without exception one extremity of the bone at the border of the articular surface will be affected. Hence comes the term "periarticular exostosis." It seems that this term, accompanied with the conditions as to degree (partial or complete) and location (proximal or distal end of a phalanx), will well describe the condition in scientific terms.

A Pioneer of Veterinary Science in South Africa.

THE NOTEWORTHY CAREER OF COLONEL IRVINE-SMITH, C.B.E.

(Reprinted from "The Sun and Agricultural Journal of South Africa," January, 1930.)

Colonel James Irvine-Smith, C.B.E., V.D., J.P., M.R.C.V.S., F.R.S.I., DIRECTOR, ABATTOIR AND LIVE STOCK MARKET DEPARTMENT, JOHANNESBURG.

Colonel James Irvine-Smith, the well-known Director of the Johannesburg Abattoir and Live Stock Market Department, qualified with first-class honours at the Glasgow Veterinary College in June, 1898, after a most successful course, being awarded a gold medal for the best professional examination, several silver medals and various first-class certificates.

After serving as Assistant to Sir Henry Simpson, Veterinary Surgeon to Her Majesty the Queen, at Windsor, he proceeded to South Africa early in 1900 as a Civil Veterinary Surgeon in the Imperial Army. It was not long before he showed marked administrative ability and was selected first as O.C. Advanced Base Veterinary Hospital, De Aar and then as O.C. A 2 Indian Field Veterinary Hospital, both of which posts were Field Officers Commands and had been held by officers with the rank of Major. At the beginning of 1902 he handed over to Major Richardson and transferred to the South African Constabulary as Assistant P.V.O. with rank of Captain and frequently acted as P.V.O. In point of fact he was responsible for the first Transvaal Civil Veterinary Organisation and for many of the early appointments to the Transvaal Civil Veterinary Department.

Diagnosis of East Coast Fever.

At the close of the Anglo-Boer War (31/5/02) but little was known regarding the nature and extent of communicable cattle disease, and since the Repatriation Department was engaged in restocking farms, there were many cases of mortality, the causes of which were obscure. Such an outbreak occurred at Komatie Poort in August, 1902, and upon investigation by Capt. Irvine-Smith proved to be East Coast fever. This historical event is best described in Theiler's words as follows:—"At the beginning of August, 1902, Veterinary Captain Smith, S.A.C., was sent to Komatie Poort to investigate an outbreak of a virulent disease in some repatriation cattle stationed there. This disease was reported to be rinderpest. Captain Smith concluded that this disease was not rinderpest, but a malady then called Rhodesian redwater, and I was able to verify this diagnosis by microscope from smear preparations sent to me. Accordingly Dr. Turner and myself went to Komatie Poort to make further investigations on the spot." Soon after this, Ordinance No. 17 of 1902, the first Diseases of Stock law under Crown Colony government, was promulgated.

Towards the end of 1902 the Transvaal Veterinary Medical Association was formed, the inaugural meeting taking place at Long's Hotel, Rissik Street, Johannesburgh. Captain Irvine-Smith was elected President and at once interested himself in the question of legal protection for the profession. A bill, acceptable to the Administration, was drawn up, and would have become law had not opposition arisen within the Association.

Appointed Municipal Veterinary Surgeon.

On leaving the S.A.C. at the end of June, 1906, Irvine-Smith was attached to the Civil Veterinary Department for a few months and in May, 1907, was appointed Municipal Veterinary Surgeon of Johannesburg. At that time this post was subordinate to the M.O.H. and included the care of Municipal animals and the inspection of private slaughter houses. Irvine-Smith soon realised that there were great possibilities for an energetic man and that, if business methods were introduced, he would receive much support from the Municipal Council. Not only did he open a horse and mule shoe factory and reorganise the farriery arrangements (thus saving the ratepayers thousands of pounds annually) but he also persuaded the authorities to construct a modern abattoir and live stock market, quarantine live stock market, by-product plant for manufacture of farm foods and fertilisers, ice and cold storage plant, workshops, extensive water pumping plant and an electric generating plant, and organised and ran auction sales of live stock and a Live Stock Indemnity Fund, and some two miles of railway sidings.

Director of Live Stock Market.

The Abattoir and Live Stock Market were opened in 1910, and up to the present 20,000,000 animals have passed through the Live Stock Market, 10,000,000 animals have been slaughtered in the Abattoir and 10,000 tons of meat condemned. Irvine-Smith was appointed Director, in addition to his duties as Municipal Veterinary Surgeon. Obviously this was too much for one man, so in the following July the care of municipal animals was transferred to the Manager of the Scavenging Department, Mr. F. C. Gavin, M.R.C.V.S.

During the above period Irvine-Smith had interested himself in the volunteer movement and in January, 1906, was appointed P.V.O., Transvaal Volunteers. He organised the Transvaal Veterinary Corps (a most efficient unit which possessed a considerable subordinate personnel) was promoted Lieut.-Colonel in May, 1909, and transferred to the Reserve of Officers in June, 1914.

German South-West African Campaign.

On the outbreak of the Great War in August, 1914, nothing had been done towards organising a Veterinary Service for the Union Defence Forces. There was indeed one Veterinary Officer, Major Collyer, attached to the permanent force (consisting of five S.A.M.R. regiments), and he was doing the work of several men. The Defence Authorities, bearing in mind Lieut.-Colonel Smith's previous experience, therefore recalled him from the Reserve of Officers on August 9th, and entrusted him with the creation of the South African Veterinary Corps. Irvine-Smith, now Director of Veterinary Services, Union Defence Forces, made speedy arrangements for the veterinary organisation of the Rebellion and German South-West African Campaigns and built up in a few months a highly useful service. In March, 1916, he was compelled to return to his civil duties. For his services he was mentioned in despatches and in 1918 received the military C.B.E. Later he was awarded the V.D. (Colonial Auxiliary Forces Officers' Decoration).

Soon after Union Colonel Irvine-Smith by his tenacity succeeded in gaining special powers for veterinary surgeons employed in abattoirs. These powers were specificially defined in the local Government Ordinance of 1912. When, therefore, the Public Health Bill came up after the war, Irvine-Smith fought for similar rights, and it is satisfactory to record that owing to his energy these are incorporated in the Public Health Act of 1919. Under both these measures he is an "approved Veterinary Surgeon."

In 1920 the South African Veterinary Medical Association was formed, and Colonel Irvine-Smith was elected President for the years 1921-1924. In 1924 he was made an Honorary Life Vice-President in recognition of his services to the profession.

Chairman of Commissions.

In 1920 he was appointed a member of the Agricultural Advisory Board to the Minister of Agriculture. He has served on three Live Stock Commissions and, as a result of his Minority Report in 1923, transit cooling stores have been erected at Cape Town and Durban. He was also Chairman of the Egg Export Commission (1925-26). His report, presented to both Houses of Parliament, is one of the "milestones" in the handling of perishable commodities in South Africa and created widespread notice, discussion and reforms, and he has in such ways assisted the Government in developing markets for South African produce.

Colonel Irvine-Smith was on the executive of the Witwatersrand Agricultural Society and was Chairman of the Finance Committee, Transvaal Agricultural Union. Further, he has frequently judged sheep and slaughter stock at the Pretoria, Witwatersrand and Durban Shows. He was also on the Executive of the South African Agricultural Union. Educationally, Colonel Irvine-Smith is also recognised as an authority, for he is examiner to both the University of the Witwatersrand and to the Royal Sanitary Institute. In 1924 the latter body made him a Fellow "for noteworthy and outstanding sanitary work."

The Corporation's Appreciation.

From what has been described, it is not surprising that on six occasions Colonel Irvine-Smith has received votes of appreciation from the Council of the City of Johannesburg, including the highest mark of esteem, viz., inscribed on vellum and under the seal of the Council.

As for the present, large extension work is being carried out at the Abattoir and Live Stock Market and all veterinary work, including treatment of Council's animals, Zoo animals, etc., now falls under this Department. Colonel Irvine-Smith has travelled extensively throughout the various countries in the Northern and Southern Hemispheres, making a close study of all matters pertaining to live stock markets, packing houses, abattoirs, meat inspection, transport, storing and preservation of perishable commodities, and the manufacture of various fertilisers and by-products.

Coming out to South Africa twenty-nine years ago as "Civil Veterinary Surgeon," Colonel Irvine-Smith has by sheer grit and determination created the highest veterinary post on the continent of Africa. Possessing the qualities of courage, confidence and creative ability, he has left his

mark on every phase of professional activity in this country and his life story may well serve as an inspiration to young veterinarians for many years to come.

Johannesburgh M.O.H.'s Comparisons.

In the course of an interview accorded to a representative of the *Rand Daily Mail* concerning the impressions gained during a six months' visit to this country, Dr. A. J. Milne, Medical Officer of Health, Johannesburgh, stated:—

"My impression of health conditions in the large English provincial cities is that the conditions and the health services in Johannesburg are as good as the average in Great Britain.

"Johannesburg has nothing to fear—when compared with English centres—regarding meat inspection." He was convinced that the methods of slaughtering animals and meat inspection in that city were infinitely superior to anything of the kind in Great Britain. "I have not seen and do not know of any abattoir in Great Britain which is equal to the Johannesburg Municipal Abattoir," he stated. Many abattoirs in England were privately owned, therefore the same effective municipal control as existed in Johannesburg did not operate there.

The methods of inspection of fish, tinned foodstuffs and market produce were, if anything, in Dr. Milne's opinion, on a higher level in Johannesburg than in the large English cities.

Referring to the milk supply, Dr. Milne said that, despite the much-vaunted system of milk grading in England, including the use of the tuberculin test, the quality of the milk supplied to Johannesburg, and particularly the hygienic methods of milk production, were superior to those in the large English towns. As to the tuberculin testing of cows and the veterinary inspection of milk herds, a better scheme of veterinary inspection was desirable in Johannesburg, even though tuberculosis in cows was much less prevalent in the Transvaal than in Great Britain.

From The Veterinarian,

January, 1830.

The Symptoms and Cure of Navicular Disease in the Feet of Horses.

By Mr. James Turner, Veterinary Surgeon, Regent Street, London.

(Read at the Veterinary Medical Society, December 4th, 1829.)

(*Continued from page* 318.)

I contend that the navicular joint disease is generally, though not always, preceded by one of these contractions of the horny box. It may be the general contraction first described, or this occult partial contraction.

There will be found an ascent of the coffin bone within the hoof, occasioned by the contraction; it is the *elevation* of this larger foot bone which necessarily puts its small companion, the *navicular bone*, in jeopardy. I say necessarily, because they are so closely knit together by ligaments, that the smaller bone bears the resemblance of a process to the larger.

The *occult* contraction is chiefly to be dreaded for these obvious reasons; it occasions a more partial pressure, is frequently more rapid in its progress, and, by operating principally from below upwards, has a greater tendency to elevate the coffin and navicular bones.

On the contrary, the *simple* or *general* contraction is a more lateral compression, and so slow in its encroachment that it affords, perhaps, one of the most striking instances in the animal creation of Nature's resources, when contending against hostile agencies, if she is not too abruptly violated. This is completely verified in the contracted foot of an old hard-worked horse, free from lameness. Nature appears to have had time to adapt herself to the change without inflammation being induced, in that degree, however, sufficient to occasion pain.

The first effect of contraction, whether of the simple or occult kind, appears to be absorption; but, notwithstanding its continuance, we find that the laminæ remain entire, also the sensible sole, together with the inferior and lateral cartilages, except the latter should be ossified; but there is one important organ which falls an early sacrifice, viz., *the pulpy substance, commonly called the fatty frog or elastic cushion, which becomes in part absorbed.* The cartilaginous or reticular portion, being a harder body, remains; therefore it still retains its form in a condensed state, and is yet an elastic substance, although degenerated into a hard cushion instead of a soft one. Thus it is that that portion of the main back sinew of the leg, the flexor perforans tendon, where it forms the navicular joint, is no longer embedded in such an elastic medium as would defy all human ingenuity to imitate, which was the original condition of the fatty frog.

The dilapidated state of this spring affects the elasticity of the posterior parts of the foot in other ways besides the resistance it opposes to the navicular bone in its descent; for I believe the fatty frog, as it is called, to be an organ which performs *several* important functions, as regards elasticity alone, and that there is an additional reason for the larger half of this elastic mass being placed posterior to the navicular joint, besides that of expanding the lateral cartilages from its continuity. For, when we consider the extensive pulley-like motion between the tendon and the navicular bone, and that all the upper part of this pulley-like surface, from the oblique position in which the bone is placed, could not be benefited by a spring immediately under it; and taking also into the account, that the navicular bone, in its descent, must incline backward, in unison with the motion of the coffin bone, it follows that a soft pillow was as much required at the back as at its base; and, indeed, a more extensive one, as the back part of this surface presents a larger space than the inferior.

Notwithstanding all this difference between the soft bed and the hard one, still it cannot be denied that there are many thousand horses in this country so circumstanced, which go perfectly free from lameness; though I much doubt if any one of them retains the full degree of elasticity in action which he originally possessed.

But the absence of lameness is by no means a proof of the harmlessness of this antecedent disease; for the navicular joint of such a foot, although sound as adamant, and its surfaces polished like ivory, and duly lubricated with synovia, is in jeopardy, and only requires two or three more concurring circumstances to affect a lesion within its delicate organisation; and this frequently happens instantaneously.

(*To be continued.*)

Buchan Veterinary Surgeon Seriously Burned.

We regret to learn, from *The Aberdeen Press and Journal*, that Mr. David Crabb, M.R.C.V.S., of Buchan, was the victim of an alarming burning accident on Saturday, March 29th. It appears that he was mixing powder ingredients in a mortar when they suddenly burst into flames, Mr. Crabb sustaining serious burns on the face and hands. Mrs. Crabb acted with courage and presence of mind, throwing a wet cloth over the mortar and carrying it outside, thus preventing what might have been an extensive conflagration, as the flames had already involved the window curtains.

Mr. Crabb is suffering severely from shock.

Notes and News.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

April 12th.—Meeting of the Yorkshire Division, N.V.M.A., at Leeds.
April 14th.—Meeting of the Editorial Committee, N.V.M.A., 4.30 p.m., at 2 Verulam Buildings, Gray's Inn, W.C.1.
April 17th.—Annual Dinner of the North Wales Division, N.V.M.A., at Carnarvon.
June 5th.—R.C.V.S. Annual General Meeting, Dublin.
June 13th.—D.V.S.M. Written Examinations.
June 16th.—D.V.S.M. Oral Examination commences.
July 2nd.—R.C.V.S. Quarterly Meetings.
July 3rd.—R.C.V.S. Quarterly Meetings.
July 4th.—R.C.V.S. Quarterly Meetings.
July 7th.—R.C.V.S. Membership Examination commences.

AUGUST 4th to 9th.—11th INTERNATIONAL VETERINARY CONGRESS, CENTRAL HALL, WESTMINSTER.

R.C.V.S. Obituary.

Conroy, Edward J., Greenville, Maryborough, County Leix. Graduated Edinburgh, December 20th, 1893. Died March 17th, 1930.

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Mr. V. Pride-Jones.

After suffering for some time from para-typhoid and pneumonia, Mr. V. Pride-Jones, has died at his home, Sackville House, Newmarket.

Mr. Pride-Jones had been veterinary surgeon to the Jockey Club since July, 1926. At one time or another he had been consulted by most of the leading training establishments at Newmarket; and for some years he had been in partnership with Messrs. N. V. S. Cannon and J. L. Jarvis in the Headquarters Bloodstock Purchasing Agency, which buys, sells, ships, and insures all classes of thoroughbreds.

Army Veterinary Service.

Movement of Officers.

Major G. Lloyd, D.S.O., arrived home from India on the 1st instant, and is now on leave pending posting.

Majors G. K. Shaw, V. A. Bartrum, O.B.E., and T. Hodgins, and Captain J. P. Hegarty, M.C., are at present in this country on leave.

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London Gazette—War Office—Regular Army.

April 4th.—Major R. A. Gooderidge, O.B.E., R.A.V.C., relinquishes the appointment of Instr. Equitn. Sch. (March 1st).

Territorial Army.

April 4th.—Captain T. W. M. Cameron to be Major (February 18th).

Personal.

Appointments.—Captain H L. Torrance, M.R.C.V.S., D.V.S.M. (Vict.), has left Birkenhead upon his appointment as Chief Veterinary Officer to the Nottinghamshire County Council.

Mr. H. Cronley, M.R.C.V.S., has been appointed to a position as Veterinary Officer, Uganda Protectorate.

Captain J. L. Stewart, M.C. (B.Sc., Edin.), M.R.C.V.S., Veterinary Officer, Gold Coast, has received promotion to Principal Veterinary Officer, Gold Coast.

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Will.—McKinna, Mr. John, F.R.C.V.S. (66), of Wentworth Street, Huddersfield (net personalty, £7,286), £7.423.

Tuberculin-Tested Animals and Exhibition Order.

In the House of Commons recently, Mr. Ramsbotham asked the Minister of Health whether he had received any protests from agricultural societies regarding the order he recently issued, prohibiting the exhibition at agricultural shows of animals from tuberculin-tested herds; and, if so, whether, in view of the hardship caused by the imposition of this order, he would reconsider the advisability of introducing it.—Mr. Greenwood replied: Yes, Sir, I have been informed that some of the bodies responsible for the organisation of agricultural shows are now prepared to arrange for the segregation of animals belonging to licensed tuberculin-tested herds, and I have promised to see their representatives with a view to considering the withdrawal of the prohibition in the case of shows where effective provision is made for this purpose.

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At a meeting of the Council of the Royal Agricultural Society held on April 3rd, the decision of the Minister of Health prohibiting the exhibition of cattle from tuberculin-tested herds at shows where they would have to mix with non-tested cattle, was considered. The Veterinary Committee, in view of the difficulties that would be created for the Royal Agricultural and other show societies if tested cattle were prohibited from attending, recommended that a conference of representatives of the chief agricultural show societies and breed societies should be called. The Stock Prizes Committee had come to the conclusion that the isolation of tuberculin-tested cattle from other cattle at the Royal Show would not be practicable.

Sir Merrik Burrell said that the Minister of Health, in enforcing a decision which had been adopted some years ago, had chosen a time which was extremely awkward, when the arrangements for the summer shows had very largely been made. It would be very difficult to meet the requirements of the Ministry. The most unfortunate effect of the order would be felt by owners of pedigree herds producing tuberculin-tested milk under licence. These people would probably throw up their licences, since it was better business for them to have the advantage of the shop-window of the show-yard than merely to produce T.T. milk. It would be more than unfortunate if the show system should act in any way as a deterrent to the production of pure milk, so that the matter could not be treated lightly. In the hope that some way might be found out of the difficulty, a deputation from the society was to wait upon the Minister of Health. It was too late to deal with the question from the show point of view for this season, but their representatives hoped that a solution might be found, which would be satisfactory to all concerned, before next season.

There were 128,881 horses slaughtered under inspection for food in the United States during the year 1929 as against 127,066 for 1928, according to *Service and Regulatory Announcements* for January, 1930.

Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Horse and Motor Transport Costings.

To the Editor of The Veterinary Record.

Sir,—At a meeting of the Publicity Committee of the National Horse Association held on April 2nd, a question of expedients whereby the comparative costings of horse and motor transport could be better brought to public notice, was considered by the Committee. It will be remembered that in September, 1928, statements of comparative costings were embodied in the paper I presented for discussion at the Congress of the N.V.M.A. of that year, and subsequently commercial firms in London and in the Provinces permitted the publication of these in detail in a pamphlet issued by the National Horse Association. Figures are to be revised and it is now desired that the pamphlet should be again issued to commercial firms, and particularly to firms employing motor transport solely and those employing both horse and motor transport, with a view to the re-adoption and continuance of the horse as a more economic unit for commercial transport.

It was suggested that possibly veterinary practitioners could assist the National Horse Association in supplying the Association with the names of firms in cities and in districts to whom the pamphlet might be sent. If practitioners who are interested would therefore be so helpful as to send in names of suitable firms to the Secretary, National Horse Association, 12, Hanover Square, London, W.1, the Council of the Association would be very grateful. Or if practitioners could issue pamphlets themselves, any desired number could be placed at their disposal for distribution.

Yours faithfully,
J. Moore.

16, Frognal Lane,
Hampstead, N.W.3.
April 2nd, 1930.

A Milk Fever Treatment Preparation.

To the Editor of the Veterinary Record.

Sir,—I am amazed to observe in to-day's issue of the *Veterinary Record* an advertisement by a commercial firm referring to a preparation which they state is described by me in my paper on Milk Fever on page 303 of the same issue.

If this refers to the substance with which I have been experimenting, it is the first indication I have had that it is on the market as a commercial product, and as the matter is liable to be misinterpreted, I would be glad if you would give this letter publication.

Yours faithfully,
J. Russell Greig.

April 5th, 1930.

The Editor acknowledges the receipt of the following:—

Report of the annual meeting of the Southern Counties Division, N.V.M.A., from Mr. J. Facer (Hon. Secretary).

Report of a meeting of the Western Counties Division, from Captain S. J. Motton, Hon. Secretary.

Communications from Dr. W. H. Andrews (Weybridge), Mr. H. T. Matthews (Liverpool), Major-General Sir John Moore (London), Professor Dr. B. Sjollema (Utrecht) and Dr. W. R. Wooldridge (London).

Diseases of Animals Acts, 1894 to 1927.

SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy).§†		Parasitic Mange.§		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks confirmed.	Animals attacked.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 16 to 31 March, 1930	26	27	—	—	—	—	13	17	7	115	51
Corresponding period in—											
1929 ...	18	19	1	103	—	—	15	36	12	57	29
1928 ...	34	44	8	227	—	—	22	52	18	65	32
1927 ...	21	26	—	—	—	—	22	30	21	73	35
Total 1 Jan. to 31 Mar., 1930	130	136	—	—	—	—	98	148	228	644	252
Corresponding period in—											
1929 ...	123	137	20	1,804	—	—	107	207	268	314	133
1928 ...	164	185	8	7,336	—	—	140	318	243	411	190
1927 ...	134	175	21	1,917	—	—	156	255	281	317	135

Note.—The figures for the current year are approximate only.

† Including outbreaks in recently imported animals.

§ Excluding outbreaks in Army Horses.